Hospital Topics

TODAY'S HOSPITAL PRACTICES

DECEMBER, 1959

Self-Supporting Psychiatric Unit

page 40

Central Stores Supermarket

page 47

Quality builds

We at Hausted proudly display a partial list of hospitals all over the world that have again and again turned to us for the finest in patient handling equipment. We would like to take this time to thank these hospitals and the many more that are not listed.

Ray Hausted

ALABAMA
Birmingham — Carraway Methodist Hospital
Dothan — Southeast Alabama General Hospital
Montgomery — St. Margaret's Hospital
Phenix City — Homer D. Cobb Memorial Hospital
Tuscaloosa — Druid City Hospital

ARIZONA
Phoenix — Good Samaritan Hospital
Maricopa County General Hospital
St. Joseph's Hospital
Tucson — Tucson Medical Center

ARKANSAS
Fort Smith — St. Edward's Mercy Hospital
Sparks Memorial Hospital
Hot Springs — St. Joseph's Hospital
Little Rock — Arkansas Baptist Hospital
St. Vincent's Infirmary

CALIFORNIA
Eldridge — Sonoma State Hospital
Fresno — Fresno Community Hospital
Long Beach — St. Mary's Hospital
Los Angeles — Cedars of Lebanon Hospital
Good Samaritan Hospital
White Memorial Hospital
Newport Beach — Hoag Memorial Hospital
Norwalk — Metropolitan State Hospital
Pomona — Pomona Valley Community Hospital
Sacramento — Sutter Community Hospitals of Sacramento
San Jose — O'Connor Hospital
San Jose Hospital

COLORADO
Colorado Springs — Memorial Hospital
Denver — Children's Hospital
Mercy Hospital
St. Anthony's Hospital
St. Joseph's Hospital
St. Luke's Hospital
Pueblo — St. Mary's Hospital

CONNECTICUT
Bridgeport — St. Vincent's Hospital
New Haven — Grace-New Haven Community Hospital
Hospital of St. Raphael
Manchester — Manchester Memorial Hospital

DELAWARE
Wilmington — Memorial Hospital
Wilmington General Hospital

DISTRICT OF COLUMBIA
Takoma Park — Washington Sanitarium and Hospital
Washington — George Washington University Hospital

FLORIDA
Daytona Beach — Halifax General Hospital
Gainesville — University of Florida Infirmary
Lakeland — Morrell Memorial Hospital
Orlando — Orange Memorial Hospital
Tallahassee — Tallahassee Memorial Hospital
Tampa — South Florida Baptist Hospital

GEORGIA
Athens — St. Mary's Hospital
Macon — Macon Hospital
Savannah — Memorial Hospital of Chatham County
Warren A. Candler Hospital

IDAHO
Lewiston — St. Joseph's Hospital
Pocatello — Bannock Memorial Hospital

ILLINOIS
Belleville — St. Elizabeth's Hospital
Chicago — Chicago Wesley Memorial Hospital
Columbus Hospital
St. Luke's Hospital
Decatur — Decatur and Macon County Hospital
Evanston — Evanston Hospital
Hinsdale — Hinsdale Sanitarium and Hospital
Joliet — Silver Cross Hospital
Peoria — Methodist Hospital of Central Illinois
Quincy — Blessing Hospital
Rockford — Swedish American Hospital
Springfield — St. John's Hospital

INDIANA
Elkhart — Elkhart General Hospital
Evansville — Protestant Deaconess Hospital
Fort Wayne — Lutheran Hospital
Parkview Memorial Hospital
Gary — Methodist Hospital
St. Mary's Mercy Hospital
Indianapolis — St. Vincent's Hospital
Muncie — Ball Memorial Hospital
Warsaw — Murphy Medical Center

IOWA
Cedar Rapids — St. Luke's Hospital
Davenport — Mercy Hospital
Iowa City — Mercy Hospital
University Hospital
Sioux City — Methodist Hospital
St. Joseph Mercy Hospital

KANSAS
Kansas City — Bethany Hospital
University of Kansas Medical Center
Topeka — C. F. Menninger Memorial Hospital
St. Francis Hospital
Wichita — St. Joseph Hospital

KENTUCKY
Ashland — King's Daughters' Hospital
Lexington — Central Baptist Hospital
Louisville — St. Anthony Hospital
St. Joseph Infirmary
SS. Mary and Elizabeth Hospital
Paducah — Riverside Hospital

LOUISIANA
Lafayette — Lafayette Charity Hospital
Monroe — St. Francis Hospital
New Orleans — Mercy Hospital
Touro Infirmary
Shreveport — Confederate Memorial Medical Center
J. E. Schumpert Memorial Hospital

MAINE
Portland — Osteopathic Hospital of Maine
Togus — Veterans Administration Hospital
Waterville — Sisters' Hospital

MARYLAND
Baltimore — Church Home and Hospital
Lutheran Hospital of Maryland
Sinai Hospital
Union Memorial Hospital
University Hospital
Bethesda — National Institute of Health
Hagerstown — Washington County Hospital
Hyattsville — Prince George General Hospital

MASSACHUSETTS
Boston — Boston City Hospital
Massachusetts Eye and Ear Infirmary
Concord — Emerson Hospital
Dorchester — St. Margaret's Hospital
Fall River — Union Hospital
Framingham — Cushing Hospital
Lynn — Lynn Hospital
North Adams — North Adams Hospital

MICHIGAN
Ann Arbor — University of Michigan
Detroit — Mt. Carmel Mercy Hospital
Flint — Hurley Hospital
Kalamazoo — Borgess Hospital
Lansing — Edward W. Sparrow Hospital
St. Lawrence Hospital

MINNESOTA
Cloquet — Community Memorial Hospital
Detroit Lakes — St. Mary's Hospital
Fergus Falls — Lake Region Hospital
Minneapolis — University Hospitals
St. Paul — Ancker Hospital
Willmar — Rice Memorial Hospital

MISSISSIPPI
Biloxi — Keesler Air Force Base Hospital
Gulfport — Memorial Hospital
Pascagoula — Singing River Hospital

MISSOURI
Columbia — University of Missouri Hospital
St. Louis — Homer G. Phillips Hospital
Incarnate Word Hospital

MONTANA
Billings — St. Vincent's Hospital
Polson — Hotel Dieu Hospital

Building Tomorrow's

THE HAUSTED

Confidence...

NEBRASKA
Norfolk — Lutheran Hospital
Omaha — Children's Therapy Center; Immanuel Deaconess Institute; Lutheran General Hospital; Nebraska Methodist Hospital; University of Nebraska Hospital

NEVADA
Reno — St. Mary's Hospital

NEW HAMPSHIRE
Hanover — Mary Hitchcock Memorial Hospital
Manchester — Sacred Heart Hospital
Nashua — Nashua Memorial Hospital

NEW JERSEY
Bayonne — Bayonne Hospital
Belleville — Clara Maass Memorial Hospital
Elizabeth — Elizabeth General Hospital; St. Elizabeth Hospital
Hackensack — Hackensack General Hospital
Montclair — Mountainside Hospital
Newark — Newark Beth Israel Hospital
Passaic — St. Mary's Hospital
Phillipsburg — Warren Hospital
Plainfield — Muhlenberg Hospital
Salem — Salem County Memorial Hospital

NEW MEXICO
Albuquerque — Bataan Memorial Methodist Hospital
Carlsbad — St. Francis Xavier Hospital
Los Alamos — Los Alamos Medical Center, Inc.
Roswell — St. Mary's Hospital

NEW YORK
Albany — Memorial Hospital
Binghamton — Binghamton City Hospital
Brooklyn — Kings County Hospital Center; Long Island College Hospital
Buffalo — Buffalo State Hospital; Roswell Park Memorial Institute
Elmira — Arnot Ogden Memorial Hospital
Far Rockaway — St. Joseph's Hospital
Hudson — Columbia Memorial Hospital
Lackawanna — Our Lady of Victory Hospital
Mineola — Nassau Hospital
Mt. Vernon — Mt. Vernon Hospital
New York (Bronx) — Lenox Hill Hospital; Misericordia Hospital; New York Medical College; New York Polyclinic Hospital; Presbyterian Hospital
Syracuse — Syracuse General Hospital; University Hospital
White Plains — White Plains Hospital

NORTH CAROLINA
Asheville — St. Joseph's Hospital
Chapel Hill — University of North Carolina Infirmary
Charlotte — Presbyterian Hospital
Concord — Cabarrus County Hospital
Greensboro — Moses H. Cone Memorial Hospital
Wilmington — James Walker Memorial Hospital

NORTH DAKOTA
Bismarck — Bismarck Hospital; St. Alexius Hospital
Valley City — Mercy Hospital

OHIO
Akron — Akron General Hospital
Barberton — Barberton Citizens Hospital
Cincinnati — Cincinnati General Hospital; Good Samaritan Hospital
Cleveland — Cleveland Clinic Hospital; Fairview Park Hospital; Huron Road Hospital; Lutheran Hospital; St. Luke's Hospital; St. Vincent's Charity Hospital
Columbus — Doctors Hospital; Mount Carmel Hospital; O.S.U. Starling-Loving Hospital; White Cross Hospital
Dayton — Good Samaritan Hospital; Miami Valley Hospital
Lima — Lima Memorial Hospital
Medina — Medina Community Hospital
Toledo — St. Charles Hospital
Warren — Trumbull Memorial Hospital
Youngstown — St. Elizabeth's Hospital; Youngstown Hospital

OKLAHOMA
Chickasha — Grady County Hospital
Oklahoma City — Mercy Hospital; University of Oklahoma Medical Center
Tulsa — St. John's Hospital

PENNSYLVANIA
Altoona — Altoona Hospital
Bethlehem — St. Luke's Hospital
Bristol — Lower Bucks County Hospital
Harrisburg — Harrisburg Polyclinic Hospital
McKeesport — McKeesport Hospital
Philadelphia — Albert Einstein Medical Center; Hospital of the University of Pennsylvania; St. Agnes Hospital
Rochester — Rochester General Hospital
Sharon — Sharon General Hospital
Williamsport — Divine Providence Hospital
York — York Hospital

RHODE ISLAND
Providence — Roger Williams General Hospital; St. Joseph's Hospital

SOUTH CAROLINA
Anderson — Anderson Memorial Hospital
Charleston — Medical College Hospital
Columbia — Columbia Hospital; South Carolina State Hospital

SOUTH DAKOTA
Aberdeen — St. Luke's Hospital
Huron — St. John's Hospital

TENNESSEE
Chattanooga — Baroness Erlanger Hospital
Clarksville — Memorial Hospital
Elizabethton — Carter County Memorial Hospital
Paris — Henry County General Hospital

TEXAS
Dallas — Gaston Hospital; Methodist Hospital; St. Paul's Hospital
Houston — M. D. Anderson Hospital; Memorial Hospital
San Antonio — Baptist Memorial Hospital; Santa Rosa Hospital

UTAH
Ogden — St. Benedict's Hospital
Salt Lake City — St. Mark's Hospital; Salt Lake County Hospital

VERMONT
Bennington — Henry W. Putman Memorial Hospital
Randolph — Gifford Memorial Hospital

VIRGINIA
Arlington — Arlington Hospital
Danville — Memorial Hospital
Norfolk — De Paul Hospital
Winchester — Winchester Memorial Hospital

WASHINGTON
Everett — Providence Hospital
Tacoma — Mary Bridge Children's Hospital
Yakima — Yakima Valley Memorial Hospital

WEST VIRGINIA
Huntington — Cabell Huntington Hospital
Weirton — Weirton General Hospital
Wheeling — Ohio Valley General Hospital

WISCONSIN
Cudahy — Trinity Memorial Hospital
Fond Du Lac — St. Agnes' Hospital
Green Bay — Bellin Memorial Hospital; St. Vincent's Hospital
Janesville — Mercy Hospital
Madison — Madison General Hospital
Milwaukee — Columbia Hospital; Evangelical Deaconess Hospital; Misericordia Hospital; St. Michaels Hospital

WYOMING
Cheyenne — De Paul Hospital; Memorial Hospital of Laramie County
Lovell — North Big Horn County Hospital

ALASKA
Anchorage — Providence Hospital
Mt. Edgecumbe — P.H.S. Alaska Native Hospital
Palmer — Valley Presbyterian Hospital

HAWAII
Honolulu — Kapiolani Maternity Hospital; Kuakini Hospital; Queen's Hospital

CANADA
Camrose, Alberta — St. Mary's Hospital
Halifax, Nova Scotia — Victoria General Hospital
Spring Hill, Nova Scotia — All Saints Hospital
Fort William, Ontario — McKellar General Hospital

BRAZIL
Sao Paulo — Hospital Das Clinicas

CENTRAL AMERICA
El Salvador — Hospital San Juan de Dios
Guatemala — Hospital Militar De Guatemala

EGYPT
Cairo — Medical Corps, U.S.N.

FRANCE
Paris — American Hospital of Paris

GERMANY
Weisbaden Area Command — USAF Hospital

ITALY
Milano — Capagnia Medico-Sanitaria

LIBERIA
Monrovia — National Public Health Service

PERU
Lima — Maison de Sante

PHILIPPINES
Manilla — Oceanic Medical, Inc.

PUERTO RICO
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SOUTH AUSTRALIA
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staph newsletter

THIRD OF A SERIES WITH SIGNIFICANT SUGGESTIONS FOR CONTROLLING CROSS INFECTION

EARLY in October we had the privilege of seeing a dramatic scientific exhibit at the American College of Surgeons' meeting in Atlantic City. Under the title "How to Stamp out Staph in the Operating Room", Dr. Ralph Adams presents the results of the complete system used in the 50-bed Wolfeboro, New Hampshire, hospital of which he is Chief of Surgery. Having kept meticulous records through over 800 consecutive cases, Dr. Adams is able to show that they did "stamp out staph" and that the low cost of doing so far outweighs the costly hazards of not doing so. Only two infections occurred.

Emphasis is on a completely integrated plan including: cleaning and disinfecting all surfaces and areas vigorously with a combined disinfectant-detergent (Tergisyl®); linen and blanket disinfection with Amphyl®; strict policing of O.R. entry and the preparation of hospital personnel for entry; isolation of patient's skin by impervious plastic skin drapes; and proper masking and attire. Watch for this exhibit at other professional meetings. Both the system and the savings in cost are immensely interesting.

There seems to be an increasing number of reports in the medical journals on the dangers of the cord in the newborn as a portal of entry for infections. One report seems particularly significant. After a 2½ year study at Brooke Army Hospital, it was found that the staph infection rate increased from 5% on the day of birth to 65% on 1-day-old infants and 85% on 2-day-old infants. (J. Ped. 53:538, Nov., 1958)

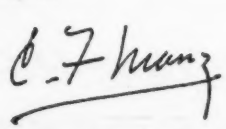
After the first Staph Newsletter appeared, we were deluged with requests for Dr. Otto H. Ravenholt's article on eliminating staph in blankets by using Amphyl® routinely in the laundry procedure. Dr. Ravenholt's comparative study confirms 98% reduction in colony count on blankets in use. Many hospitals who wrote us were concerned about damaging wool blankets while killing staph and other organisms. Best evidence that Amphyl disinfection will not damage blankets is that a Seattle sanatorium has wool blankets in service now which were bought ten years ago and have been Amphyl-washed-and-disinfected at least once a week without injury. We now have a new supply of Dr. Ravenholt's article which cites this and, also, a new instruction card on disinfection of blankets, linens, and diapers. Both are available in quantities for discussion or teaching, along with necessary samples. Please write for them.

Staph kills Caruso. Yes, Enrico Caruso. Physicians in Naples, where he died 38 years ago, described the cause of death simply as an abscessed kidney which ruptured and produced peritonitis. Looked at with today's increasing knowledge of the ravages of staph, "it seems likely that he had pneumonia, empyema, satellite abscesses on the fascia and muscles of the left side of the chest, a subphrenic abscess, possibly a perirenal abscess, and terminally, general peritonitis". You'll find the complete report by Dr. Richard W. Prichard in the Surgeon's Library section of the July, 1959, issue of Surgery, Gynecology & Obstetrics.

Have you made plans yet for showing the new motion picture produced by the Communicable Disease Center of the U. S. Public Health Service, "Prevention and Control of Staphylococcal Disease"? It points up many danger spots in the hospital and gives practical, pertinent suggestions for overall control. The demand for the copies of this film which we procured especially for your use is increasing fast, so let me know soon when we can schedule an early showing for you.

Another film you won't want to miss is "Hospital Sepsis: A Communicable Disease", sponsored jointly by the AMA, ACS, and AHA on an industry grant with the technical advice of Dr. Carl W. Walter. Documentary scenes were made under actual hospital conditions as a real staph patient contaminates her surroundings. For environmental control, generous use of disinfectant-detergent is demonstrated. We do not have this film, but we do have Tergisyl® disinfectant-detergent which fits the recommendation made by Dr. Walter at a Massachusetts Medical Society meeting earlier this year—that a synthetic phenolic is the product of choice for operating room floor care. If you would like Tergisyl samples and literature, please ask for them.

If you don't already have it, please make a note of our new address shown below. Early in October the Professional Division of Lehn & Fink moved into new, larger executive offices in Toledo. When you want to know more about how Amphyl®, Lysol®, and O-syl® disinfectants, and Tergisyl® disinfectant-detergent can help you control any sort of cross infection—please write us. We realize this is only one part of the complete control program, but an important one. As always, our research laboratories and technical advisors are ready to help and I, personally, would like very much to hear from you.



Charles F. Manz
General Sales Manager
Professional Division

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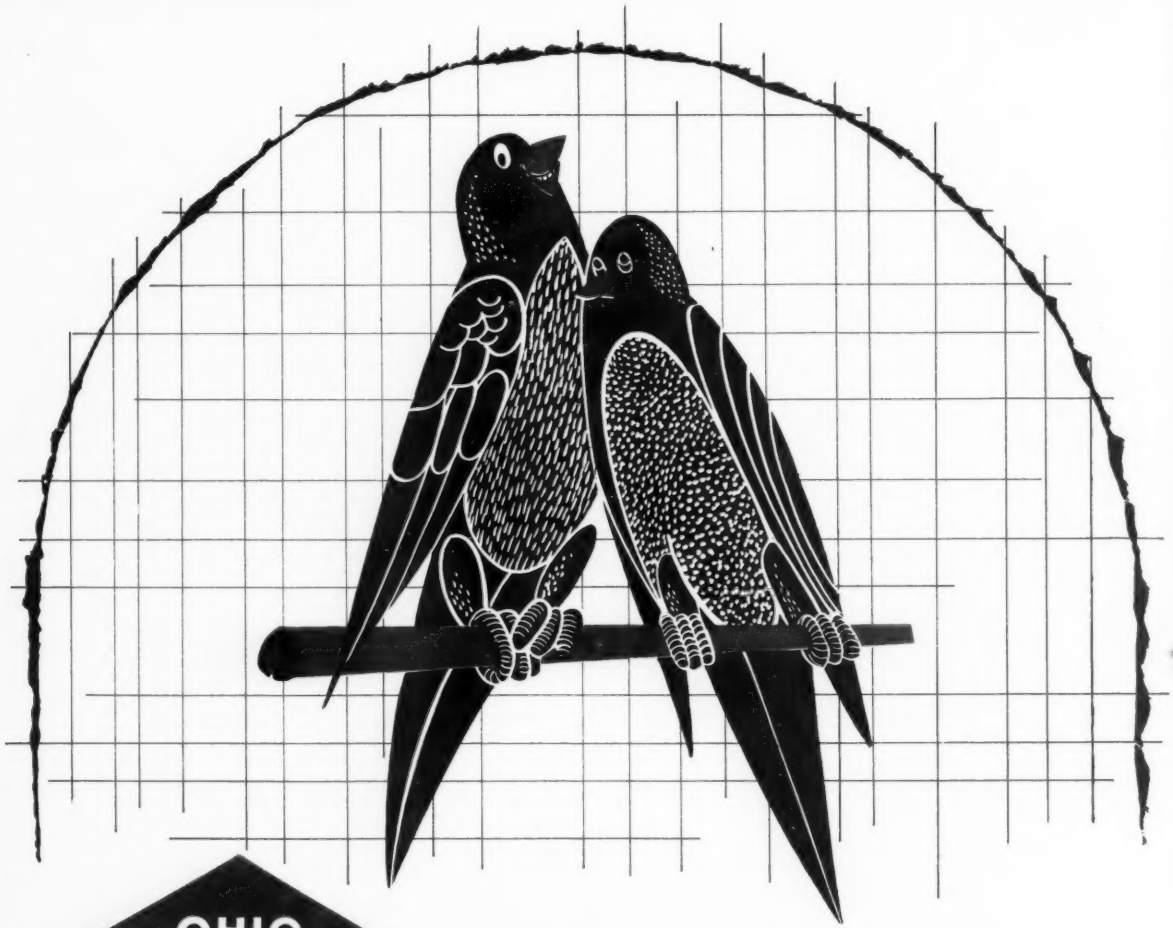

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THIS MONTH IN

HOSPITAL *Topics*—

- Administrator **Walter G. Ebert** (also TOPICS' Personality of the Month) and chief psychiatrist **Marvin Greiber, M.D.,** Ball Memorial Hospital, Muncie, Ind., let TOPICS in on the "how they do it" of managing a psychiatric unit in a general hospital—a unit that is both paid for and self-supporting.

- "Supermarket" style central stores and purchasing organization is detailed knowingly and thoroughly with the cooperation of Sister Eugene Marie, administrator, Good Samaritan Hospital, Cincinnati, O. She has developed a unique and workable concept which TOPICS presents for the information of its readers.

- TOPICS' consultant **Sigmund L. Friedman, M.D.,** joins us again this month—with a survey of what is currently being written about today's trends and needs in the hospital emergency department.

- Interdependence of hospital pharmacist and pharmaceutical manufacturer is discussed by **Sidney H. Willig** in an article on the medical detailman. Legal liabilities of both are also touched upon.

- Some methods for keeping food costs in line and still providing the highest quality of food for the hospital's patients are shared with TOPICS' readers by **John W. Stokes,** Boston, Mass., management consultant. Specific problems are mentioned — from purchasing to pilferage — with recommendations about each.

- **TOPICS' cover montage** was developed by prize-winning photographer **Jon R. Pownall,** from sequences shot in the chapel of Chicago's Wesley Memorial Hospital.

—Along with its cover message of "peace on earth, good will toward men," TOPICS sends you all heartiest good wishes for a joyful holiday season.

Look for TOPICS' personality of the month on page 19.

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HOSPITAL Topics
The News Magazine for the Hospital Staff

DECEMBER, 1959
VOL. 37, NO. 12

Scanning the News

Hormone Therapy Controls "Runaway" Heartbeat

The wild, disorganized beating of a heart with the condition called cardiac arrhythmia can now be brought under control, reports Eliot Corday, M.D., Los Angeles, Calif. In his study, Dr. Corday treated 26 heart-attack patients with drop-by-drop injections of the hormone noradrenalin, with dramatic results.

All but one of the patients survived their episodes of cardiac arrhythmia. In most cases the wild heartbeat was returned to normal within minutes, states Dr. Corday.

Treatment involves raising the patient's blood pressure which has dropped as a result of the arrhythmia, but too much of a rise may cause return of the runaway beat. Use of a drug which produces its effect quickly and can be cut off quickly is therefore essential in this therapy, Dr. Corday adds.

"Mushroom Disease" Strikes Migrant Workers

Commercial mushroom growing seems to carry a special hazard for the migrant Puerto Rican mushroom worker. So report Louis S. Bringhurst, M.D., Robert N. Byrne, M.D., and Jacob Gershon-Cohen, M.D., West Chester, Pa., who have encountered 16 cases of a disease similar to "farmer's lung" and "silo-filler's disease," among this group.

The doctors further state that the disease did not affect workers of local origin. Unsure of its cause, they speculate that it could be from molds or organic dust inhaled during the laying or cleaning of damp compost beds used in mushroom culture. The condition's resemblance to "silo-filler's disease" also suggests inhalation of nitrogen dioxide as the cause, they add.

A soundproof room is being used as a laboratory for research in low intensity heart sounds and murmurs by the Department of Medicine of the Medical College of South Carolina. According to officials at the college, the soundproof room virtually eliminates ambient noises and enables the use of highly sensitive instruments which otherwise would be overridden by environmental noise. Industrial Acoustics Co., Inc. manufactured the booth.

Professional Boxers in Hematuria Study

After a three-year study of 764 boxers, Aaron H. Kleiman, M.D., New York City, reports that repeated kidney blows were primary factors in causing hematuria in the group.

Significant amounts of blood in the urine were found in 27 percent of 1,518 urinalyses performed after bouts. Incidence of hematuria was twice as high in the white boxers as in the non-white, although there were twice as many of the latter in the study, according to Dr. Kleiman.

Dr. Kleiman adds that studies of a control group of 100 non-athletes showed that exercise alone did not cause the hematuria condition. Renal trauma, and not boxing itself, is the cause of the kidney damage.

Anoxia Investigators Learn from Llama

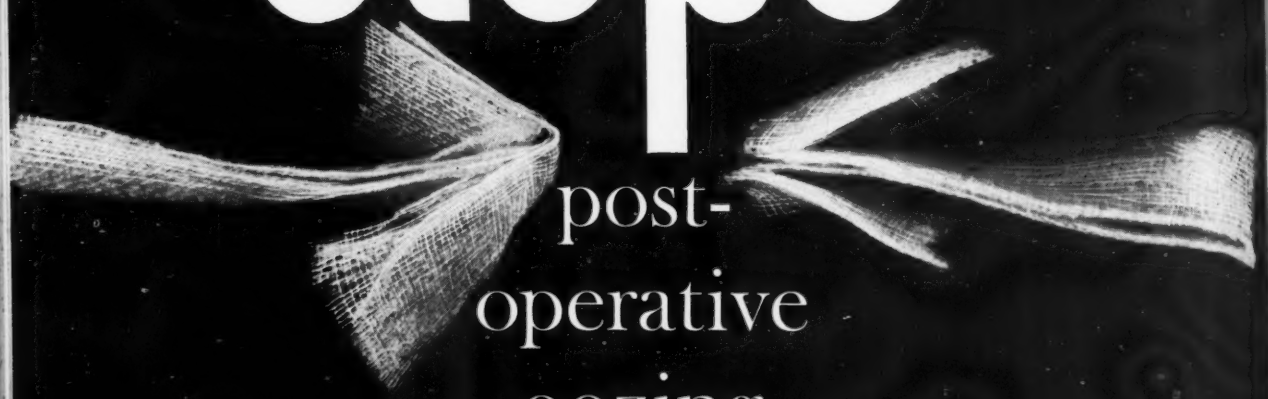
Fetal anoxia is the greatest single cause of death in human infants at birth. Yet animals, such as the llama, living in oxygen-rare high altitudes give birth to normal young without difficulty. James Metcalfe, M.D., and William E. Huckabee, M.D., of Boston, traveled to the Andean region of Peru with a team of U. S. scientists to study these animals' adaptations.

The two doctors report that the placenta of the unborn animal is much enlarged, providing a greater surface for oxygen diffusion into the fetal circulation. The concentration of red cells in the blood of both mother and fetus is increased, and the rate of blood flow to the uterus is stepped up.

These adaptations, the researchers add, permit the high altitude animal mother to supply her fetus with as much oxygen as does the sea-level animal.

(*Continued on page* 106)

stops



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News Briefs at Press Time

TEAMSTERS ANNOUNCE PLANS FOR ORGANIZING CHICAGO HOSPITALS

The Teamsters Union in Chicago made public on October 25 its intention to begin an all-out drive to sign up 25,000 nonprofessional workers in about 70 Chicago hospitals.

Local which will make the drive is the Chicago Mail Order and Warehouse Employees. The 18,000-member group is headed by Donald M. Peters, who said no move would be made to ask hospital officials for recognition until union can prove it represents the workers involved.

This announcement substantiates a TOPICS report of last February that Teamsters had decided on an all-out effort to organize hospital employees.

Our sources say that key cities in union's drive will be Chicago, St. Louis, Baltimore, and a city on the West Coast. So far the St. Louis front appears to be quiet. Teamsters were threatening in the Buffalo (N.Y.) area two or three months ago.

Chicago Teamsters thus became the third union seeking to organize hospital workers in that city. AFL-CIO State, County, and Municipal employees began picketing at Mount Sinai Hospital and the Home for the Incurables August 27. Striking employees have been replaced, and the strikes in local labor circles have for several weeks been regarded as lost.

Peters said that the Teamsters would give to the State, County, and Municipal Employees Union "all the financial, moral and legal aid needed to bring about a successful conclusion to the strikes now in progress at Mount Sinai Hospital and the Home for the Incurables."

The other union which has declared its intention of organizing hospital employees is AFL-CIO Building Service Employees' International Union, headed by William L. McFetridge, a vice-president of AFL-CIO.

The Teamsters' local represents nondriving workers. Teamster head Peters said delivery trucks to hospitals, usually driven by Teamsters, would not be asked to halt pickups and deliveries. The Chicago **Tribune** labor editor, George Bliss, pointed out, however, that it has been the practice of all Teamster affiliates to recognize picket lines of their locals.

HEW SECRETARY SAID TO FAVOR LEGISLATION LIKE FORAND BILL

HEW Secretary Flemming, who opposed the Forand bill when he testified before House Ways and Means committee last summer, is now rumored to favor a Republican counterpart of the bill. So far there appears to be no evidence that the President and the Budget Bureau have been sold on this idea.

At the secretary's news conference to release report of Federal Council on Aging, of which he is chairman, he did not endorse the Forand bill, but did admit that it is intended to meet a need which certainly exists—one for which his staff has failed to find an alternative solution.

The report endorsed further study by Social Security Administration of ways of encouraging development of coverage under voluntary plans and ways to supplement these plans. It revealed that federal government this year is spending $14.6 billion from trust funds and appropriations in benefits and services for aged.

BRIEF BRIEFS

HEW is working with its lawyers to add a section to the Hill-Burton Act to cover remodeling of old facilities. Another bill which would have made funds available for this purpose failed to pass last year.

— Steel workers are back at work temporarily, but as TOPICS goes to press a strike settlement appears to be as far off as ever. Predicted effects on hospital industry: Slowdown in construction that needs steel; a 10 percent increase in construction costs. If strike is resumed, hospital equipment will probably be exceedingly scarce within two to three months.

Eighty-two grants totaling $16,129,250 have been approved by PHS to help finance construction and equipment of health research facilities at 72 institutions in 30 states and the District of Columbia. Nearly one-half of total is included in grants to five institutions: Texas Medical Center, Temple University School of Medicine, Albany Medical College, Harvard School of Public Health, and the University of Southern California.

— All policy, planning, and staff functions of PHS international health program have been transferred from Bureau of State Services to the office of Surgeon General Leroy Burney. H. Van Zile Hyde, M.D., assistant for international affairs, assumes additional title of division chief.

Gordon W. Marshall

Calendar of Meetings

DECEMBER

1- 4 A.M.A. Clinical Meeting, Memorial Auditorium, Dallas, Tex.

3- 4 Hospital Association of Hawaii, Hawaiian Village, Honolulu

3- 4 Illinois Hospital Association, Abraham Lincoln Hotel, Springfield

3- 4 Florida Hospital Association, Robert Meyer Hotel, Jacksonville

5-10 American Academy of Dermatology and Syphilology, Palmer House, Chicago

9-11 National Association of Central Service Personnel Institute, Belmont-Plaza Hotel, New York City

10-11 Georgia Hospital Association, Southeastern Hospital Conference, Hospital Administration Institute, Henry Grady Hotel, Atlanta, Ga.

11-12 Puerto Rico Association of Hospital Administrators, Hotel Condado, Santurce

26-31 American Association for the Advancement of Science, Morrison Hotel, Chicago

1960 MEETINGS

JANUARY

21-22 Alabama Hospital Association, Dinkler-Tutweiler Hotel, Birmingham

21-22 Association of Medical Record Consultants, Morrison Hotel, Chicago

23-28 American Academy of Orthopaedic Surgeons, Palmer House, Chicago

FEBRUARY

3- 6 American College of Radiology, Roosevelt Hotel, New Orleans

7- 9 American Medical Association, Congress on Medical Education and Licensure, Palmer House, Chicago

16-18 National Association of Methodist Hospitals and Homes, Deshler-Hilton Hotel, Columbus, O.

16-19 American Protestant Hospital Association, Deshler-Hilton Hotel, Columbus, O.

22-25 Association of Operating Room Nurses, Statler-Hilton Hotel, New York City

25-27 American Orthopsychiatric Association, Inc., Sherman Hotel, Chicago

28-March 5 American College of Allergists, Americana Hotel, Bal Harbour, Miami Beach, Fla.

29-March 3 American College of Surgeons, Sectional Meetings for Surgeons and Nurses, Statler-Hilton Hotel, Boston

MARCH

10 Wisconsin Hospital Association, Schroeder Hotel, Milwaukee

13-18 National Health Council, National Health Forum, Miami, Fla.

19-24 American Academy of General Practice, Philadelphia

21-23 New England Hospital Assembly, Statler-Hilton Hotel, Boston, Mass.

21-24 Southeastern Surgical Congress, Roosevelt Hotel, New Orleans

24-26 Louisiana Hospital Association, Bellemont Motor Hotel, Baton Rouge

26-27 American Psychosomatic Society, Sheraton-Mount Royal Hotel, Montreal, Quebec, Canada

28-31 Southwestern Surgical Congress, Riviera Hotel, Las Vegas

29-31 Kentucky Hospital Association, Kentucky Hotel, Louisville

(*Continued on page* 14)

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1. Paulsen, P. F.; Creech, O., Jr., and DeBakey, M. E.: Observations on the Venous Circulation Time in the Lower Extremities: Effect of Elevation and Compression Bandages, Surgical Forum, Clinical Congress of the American College of Surgeons 5:137, 1955.
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CALENDAR OF MEETINGS

(*Continued from page 12*)

31-April 1 Georgia Hospital Association, Jekyll Island

APRIL

2- 6 American College of Obstetricians and Gynecologists, Netherland Hilton Hotel, Cincinnati

3- 6 American Surgical Association, The Greenbrier, White Sulphur Springs, W. Va.

3- 7 International Anesthesia Research Society, Shoreham Hotel, Washington, D.C.

4- 7 Ohio Hospital Association, Veterans Memorial Building, Columbus

4- 9 American College of Physicians, Mark Hopkins & Fairmont Hotels, San Francisco

7- 9 American Association of Railway Surgeons, Drake Hotel, Chicago

21-22 Carolinas-Virginias Hospital Conference, Roanoke Hotel, Roanoke, Va.

25-28 Association of Western Hospitals, Statler-Hilton Hotel, Los Angeles

26-29 Industrial Medical Association, Rochester, N.Y.

27 New Jersey Hospital Association, Convention Hall, Atlantic City, N.J.

27 Hospital Association of New York State, Convention Hall, Atlantic City, N.J.

27 Hospital Association of Pennsylvania, Convention Hall, Atlantic City, N.J.

27-29 Middle Atlantic Hospital Assembly, Convention Hall, Atlantic City, N.J.

27-29 Mid-West Hospital Association, Municipal Auditorium, Kansas City, Mo.

28-29 Iowa Hospital Association, Roosevelt Hotel, Cedar Rapids

28-30 American Association of Pathologists and Bacteriologists, Hotel Peabody, Memphis, Tenn.

MAY

1- 2 American Society for Clinical Investigation, Haddon Hall, Atlantic City, N. J.

2- 4 Tri-State Hospital Assembly, Palmer House, Chicago

2-11 Pan American Medical Association Congress, Mexico City

3- 5 Society of Pediatric Research, New Ocean House, Swampscott, Mass.

5- 6 American Pediatric Society, New Ocean House, Swampscott, Mass.

4- 6 Southeastern Hospital Conference, Deauville Hotel, Miami Beach, Fla.

5- 8 Student American Medical Association, Statler-Hilton Hotel, Los Angeles.

9-11 Aerospace Medical Association, Americana Hotel, Bal Harbour, Fla.

9-13 American Psychiatric Association, Hotel Traymore, Atlantic City, N.J.

10-12 Texas Hospital Association, Memorial Auditorium, Dallas

11-13 Upper Midwest Hospital Conference, Minneapolis Auditorium, Minneapolis

11-13 American Association for Thoracic Surgery, Deauville Hotel, Miami Beach, Fla.

15-20 National Tuberculosis Association, Statler & Biltmore Hotels, Los Angeles

(*Continued on page 16*)

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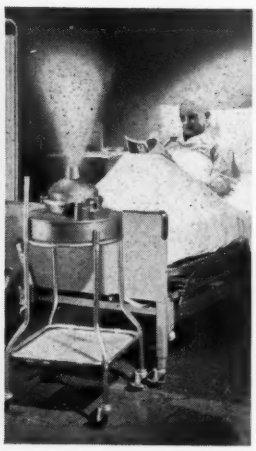

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CALENDAR OF MEETINGS

(Continued from page 14)

16-19 American Urological Association, The Palmer House, Chicago

16-21 American Association on Mental Deficiency, Lord Baltimore Hotel, Baltimore, Md.

30-June 2 American Orthopaedic Association, The Homestead, Hot Springs, Va.

30-June 2 Catholic Hospital Association, Municipal Auditorium, Milwaukee, Wis.

JUNE

8-12 American College of Chest Physicians, Miami Beach, Fla.

11-12 American Diabetes Association, Deauville Hotel, Miami Beach, Fla.

AUGUST

29-September 1 American Hospital Association, Civic Auditorium, San Francisco

SEPTEMBER

5- 9 American Association of Blood Banks, Fairmont Hotel, San Francisco

11-15 International College of Surgeons, New York City

24-October 2 American Society of Clinical Pathologists, Palmer House, Chicago

OCTOBER

12-14 Maryland — District of Columbia — Delaware Hospital Association, Shoreham Hotel, Washington, D.C.

Puerto Rican Administrators To Hold Meeting

A highlight of the third annual Puerto Rico Association of Hospital Administrators convention will be a lecture and demonstration on the care and use of patient room equipment by Alice Price, R.N., author of *The Art, Science, and Spirit of Nursing.*

The convention will be held in the Governor's Room, Hotel Condado, Santurce, Dec. 11-12.

Among important speakers are Reinaldo Ferrer, M.D., director of the regional program, and Jose Gonzalez, M.D., director, Latin American Program—A.H.A.

Some discussion topics scheduled are: "Trends in Hospital Care Today"; "The Stamp of Accreditation and What It Means"; "Volunteers and Your Public Relations Program in the Hospital"; "Modern Trends in Hospitals' Designs from Administrator's Point of View"; and "Where Are Hospitals Going?"

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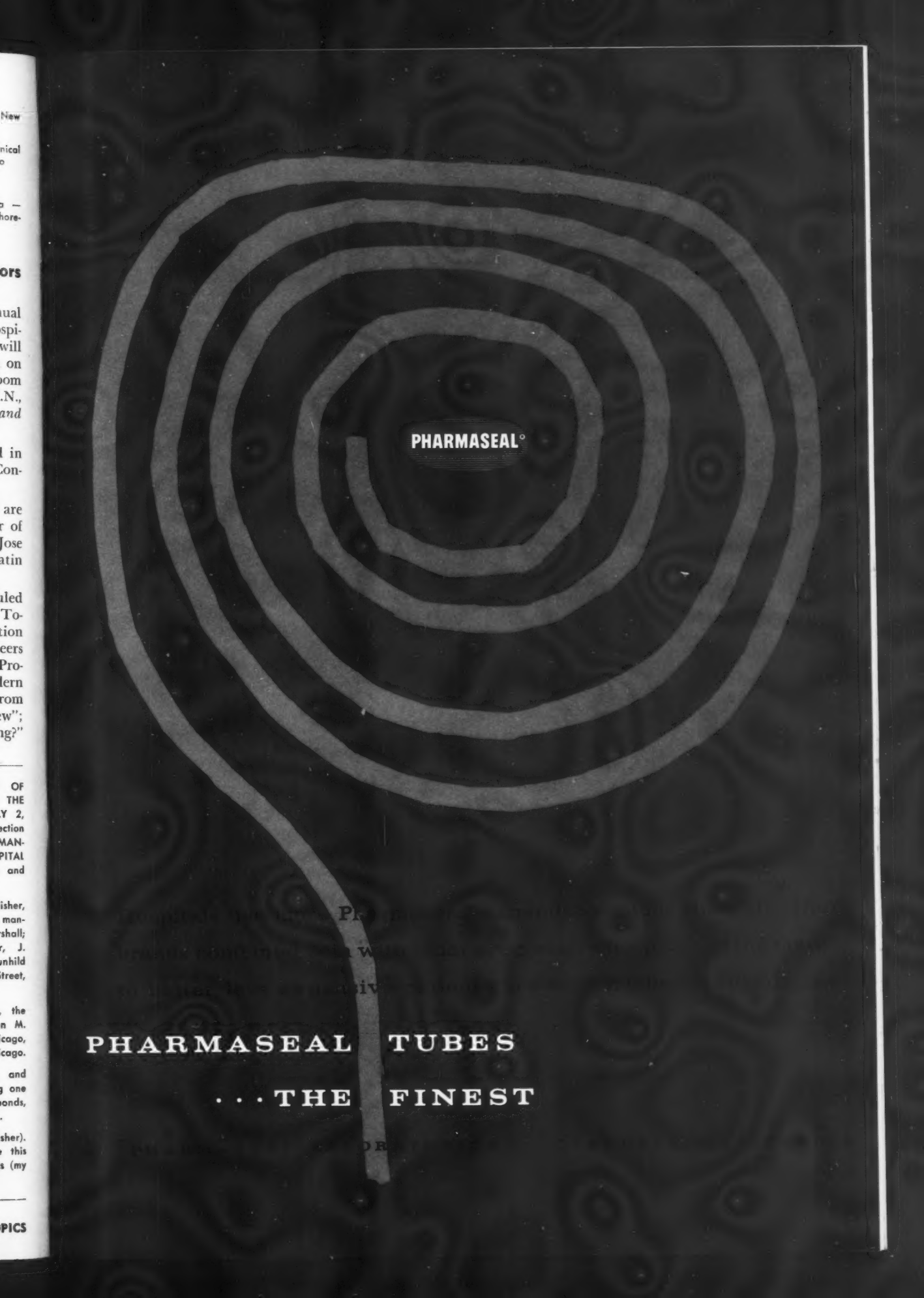
Gordon M. Marshall (Publisher).

Sworn to and subscribed before me this 20th day of October, 1959. Otilia Antos (my commission expires July 27, 1960).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HOSPITAL Topics

PERSONALITY OF THE MONTH

Whether the boy took to the sea, or the sea took to the boy defies a clear-cut answer, for they were so compatible they lived together for 20 years, each learning from the other. The boy, born Walter Gale Ebert, at Parkersburg, W. Va., went to the sea at the age of 16, and retired from the U. S. Navy with the rank of rear-admiral at the age of 40.

Graduation, in this order, from the U. S. Naval Academy, the U. S. Naval Air Training School, the U. S. Naval Submarine School, the U. S. Army Chemical Warfare School, and the U. S. Naval War College, qualified him for service above, on, and beneath the sea. His inherent abilities and characteristics marked him for leadership.

It would seem to be an insight into the man that of a multitude of war memories, this one should come to mind:

"We had scored a direct hit on a Japanese ship this day: when we surfaced, the water was full of survivors in rafts and lifeboats. A short time before, the Japs had beheaded one of our aviators; our men wanted revenge, and the men in the boats were sitting ducks.

"The consensus seemed to be to shoot them. I called up my executive officer for an opinion, and he said 'Shoot 'em up.' I said, 'You take over; *you* shoot 'em up.' In the end, everyone was going to shoot them up, and we cruised around a sea smooth as a millpond with the tropical moonlight silhouetting the Japs, waiting for someone to shoot. But no one did.

"Later, chasing another submarine through the area, we found the boats and debris still there, though the survivors had been picked up. We went alongside a boat and gathered up some gear, including a leather pouch. It contained two books, written in Japanese. They were found to record what Intelligence termed 'the most valuable information to come out of the war to date.'

"The ship had been a troop transport; the books gave convoy routes, troop movements between islands, and other top secrets. That tacit, unanimous compassion that had spared the lives of the enemy later saved the lives of untold numbers of Americans."

During the last year of the war, Mr. Ebert was U. S. Naval Liaison Officer in the China-Burma-India Theater. "This was the most important and productive position I ever held." he recalled. "My job was to gain operational intelligence from every possible source that would assist the efforts of the Pacific Fleet."

Information channels were established with the French in Indo-China, the Chinese, the Twentieth Bomber Command, the Fourteenth Air Force, and the theater headquarters of the U. S. Army. Information gathered was credited with inflicting great damage on the enemy.

From 1945 to '50, Mr. Ebert successively served as head of the academic section at Annapolis; commander of Submarine Division Twenty-Two; and Planning Officer, U. S. Submarine Force, Atlantic Fleet.

"I always had the conviction," he continued, "that I would retire under the Navy 20-year law. I had been in the service most of my life, and wanted to see what it was like to be a civilian.

"After my retirement in 1950, a friend with whom I had grown up, talked me into coming to Marietta, Ohio, where I was offered two jobs, one as assistant to the president of Marietta College, the other as administrator of the local hospital. I chose the hospital, and found a new and enormously challenging second career in the administration field."

When he left the hospital in 1952 to become administrator of Ball Memorial Hospital, in Muncie, Indiana, the president of the Marietta Memorial Hospital Corporation called him "the most capable director the hospital has had in its history, which extends back to 1929."

Mr. Ebert considers what he calls the "structure" of an organization its greatest strength—or weakness. And he believes a project he set up for the Naval Academy in 1946 the major source of his structural material.

Designated to develop a new department of Human Relations and Leadership, he prepared the text for the course, a case method of instruction, in collaboration with the department of psychology of the University of Maryland. The book, "Naval Leadership," is used as a textbook in the 55 colleges and universities which offer Naval Reserve Officer Training programs, and in the program of several foreign countries.

"The whole philosophy of the book," explained Mr. Ebert, "is that people cannot deal properly with other people unless the structure within which they operate is itself properly organized.

"For instance, when I first came to Ball Memorial, one of its greatest weaknesses was that the nursing service and the school of nursing were under one head. This is unsound organization; they are two different units with two different objectives. We split the organization down the middle. Now the teacher devotes herself exclusively to the nursing school. The head of nursing service is first a fine nurse, and second, a fine administrator. A hospital administrator," concluded Mr. Ebert, "must be many things. But I believe he must, above all else, hold the medical profession in high esteem, and yet have the courage to promote the best interests of the hospital in the face of opposition from the medical profession.

"There are many who can build the buildings, and many who can raise the necessary funds, but only a few who have the leadership ability to weld medical staff and hospital into a compatible organization constantly moving ahead in a positive program of ever improved care. This is the real challenge of hospital administration."

American College of Surgeons

. . . . Atlantic City, Sept. 28 - Oct. 2

(The following were abstracted from papers given at the 45th Clinical Congress of the American College of Surgeons, held Sept. 28–Oct. 2 at Atlantic City.)

Rapid Patient Reaction

Saline Replaces Blood as Primer in Pump-Oxygenator

Open heart surgery requires large amounts of prepared donor blood, a considerable amount of which is used for priming the pump-oxygenator. The amount of primer depends upon the type of system used and the size of the patient to be perfused. The priming volume may approach the total circulating blood volume of the patient.

If the primer of donor blood could be eliminated from the blood support needed in open heart surgery, many of the problems associated with multiple blood transfusions could be reduced. Blood bank emergencies could be alleviated and unused heparinized blood and residual blood primer would no longer be waste products of the procedure.

Laboratory investigation was concerned with the creation of a compact and suitable extracorporeal blood system, the selection of a suitable solution which is innocuous to blood and which can be safely used to prime, a method of controlling the primer above the blood stream, and a method of maintaining continuity of the circuit beneath the physiologic solution.

In laboratory tests with animals, normal saline was one of the several physiologic solutions studied. Total body perfusions lasting over two hours were performed without the need for blood support. It was noted those animals perfused with the normal saline primer in the system, instead of a fresh donor blood primer, showed more rapid reaction and a more benign postoperative course. Stored citrated blood was satisfactory for correcting any unexpected blood loss.

In the present clinical procedure, blood administration during the thoracotomy is by venous cutdown. The pump-oxygenator is primed with a liter of physiologic saline solution. A catheter is inserted into one of the femoral arteries. Air is evacuated from the arterial tubing, and arterial pressure then forces blood through the pump-oxygenator, displacing and trapping the saline primer into a restricted compartment above the levtl of the blood circuit.

Upon completion of the perfusion, the extracorporeal blood in the pump-oxygenator is pumped back into the patient. Small amounts of saline which are inadvertently administered to the patient have not caused any adverse effects.

The mechanism has been used clinically in 24 cardiac patients presenting a variety of congenital and acquired defects. All patients remain improved up to 16 months in followup. Successful results have been obtained in patients as old as 66 years, and in perfusions lasting as long as 84 minutes. The rapid reaction and the benign postoperative course of most patients are noteworthy features of the method.—*Frederick G. Panico, M.D., Wilford B. Neptune, M.D.,* New England Deaconess Hospital and Overholt Thoracic Clinic, Boston, Mass .

Responses Similar

Human Tumor in Culture Parallels Growth in Host

A human tumor in primary culture provides a system similar to that of the tumor growing in the human host. This system would seem to offer more validity in testing than do animal tumors or established cell line cultures.

Cancer patients must undergo lengthy series of trial and error tests, even when the agent proves effective. The use of primary cultures of human tumors may shorten this testing period.

In the study conducted, sterile specimens of tumors removed in the operating room were taken immedi-

ately to the tissue culture laboratory. The tumors were cut into pieces measuring no more than 1 mm. in each dimension and plasma clot cultures were prepared.

Only those cultures showing satisfactory and equal growth were selected for testing. The chemotherapeutic agents were added to the cultures in concentrations equal to those achieved in the human blood stream after intravenous injection of a therapeutic dose.

Results showed that the use of different media did not affect the sensitivity of an individual tumor to a specific agent. Each tumor system showed different sensitivities to the known effective agents. Sensitivities of the same tumor were constant, similar results being found when several cultures of the same tumor were exposed to equal concentrations of the same agent.

A close correlation has been demonstrated between tissue culture sensitivity and response in the host to a specific agent. This study further demonstrates that sensitivity results of a certain concentration of an agent in an individual tumor can be reproduced in culture, and that histologically identical tumors do not necessarily show sensitivity to the same chemotherapeutic compounds. — *Gerald O. McDonald, M.D.*, and *Warren H. Cole, M.D.*, department of surgery, University of Illinois College of Medicine, Champaign.

"Trapped" Air Dangerous

Position Changes May Contribute to Air Embolism

Air embolism has become a problem of increased importance since the rapid development of open-heart surgery. Air may be introduced into the circulation from the operative site as well as from the heart-lung machine.

Previous investigations demonstrated by means of gross changes in position that distribution of air into the arterial system is, in general, determined by the buoyancy of air in blood.

In this study, eleven adult mongrel dogs were used, and their positions, noted after anesthesia, varied. Either end of the table was raised or lowered so that the brain was located 6 cm. below the base of the aorta, 3 cm. below the base of the aorta, on the same level, and 3 cm. and 6 cm. above the base of the aorta.

In each position, 2 ml. of air followed by 6 ml. of normal saline was injected into the ascending aorta through a catheter, within a period of three seconds. The volume of air which entered the bubble trap from the carotid arteries was estimated by calibration of the diameter of coalesced gas.

From the results of the study, it would appear that the 6 cm. head down position is safer from the point of view of cerebral embolism when air is introduced into the ascending aorta. The potential danger from "trapped" air is greater in the head down position, however. This may explain the cases of air embolism appearing postoperatively upon change of position of the patient. — *Albin A. Bagdonas, M.D., Jackson H. Stuckey, M.D., Clarence Dennis, M.D., Norman S. Amer, M.D., Rodolfo T. Domingo, M.D., Richard R. Cappelletti, M.D.*, Department of Surgery of the State University of New York, Brooklyn.

Controls Oliguria

Prophylactic Hemodialysis May Prevent Renal Failure

Conventional treatment of patients with acute renal failure is often associated with high morbidity and mortality. Hemodialysis with the artificial kidney is often followed by dramatic clinical and chemical improvement. Routine daily prophylactic hemodialysis might prevent the abnormalities of the uremic syndrome if applied before the conventional indications for hemodialysis appeared.

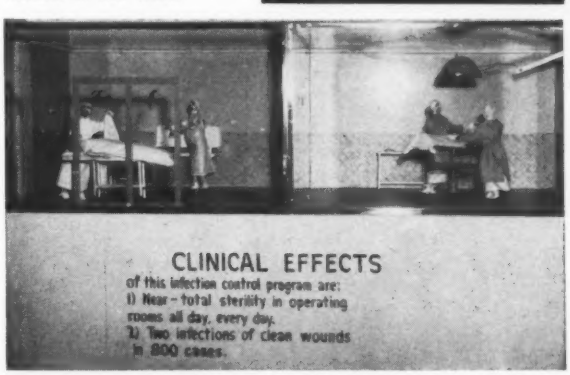
Of eleven patients tested, all of whom had received prophylactic hemodialysis, ten survived. These showed control of chemical deviations, even under prolonged oliguria conditions. The clinical course of each patient was one of improvement, in contrast to previous experience with such patients. Ambulation was well

(Continued on next page)

Ralph Adams, M.D., Huggins Hospital, Wolfeboro, N.H., demonstrates application of new mask which he and associates developed to curtail bacteria transfer from breath to atmosphere. Filter of spun glass fibers is used between inner and outer mesh screens and one of four basic mask shapes is fitted to face with pliable adaptor ring.

The model, Mrs. Adams, also wears wrap-around gown and conductive booties designed at the hospital. Sole maintains direct contact with wearer through conductive rubber strip coming up along back of bootie and held against skin on side of leg.

Below: Miniature operating rooms with staff and equipment depicted in minute detail were shown in Dr. Dr. Adams' display. Routine described resulted in reduction of infection rate to only two infections of clean wounds in 800 cases.


CLINICAL EFFECTS
of this infection control program are:
1) Near-total sterility in operating rooms all day, every day.
2) Two infections of clean wounds in 800 cases.

tolerated and appetite was improved. Diets were unrestricted except for some limitations on fluid intake volume.

Prophylactic daily hemodialysis is technically feasible. Ready access to the patient's circulation is assured by chronic cannulation of two veins or of an artery and a vein. Between dialyses, these cannulae are incorporated in a dressing which does not interfere with the patient's use of his arm.

It is hoped the new method may herald a reduction of the general mortality of patients with acute renal failure. Certainly, morbidity and mortality are strikingly reduced in the test cases, in contrast to past experience with conventional treatments. — *Paul E. Teschan, M.D., Thomas F. O'Brien, M.D., Charles R. Baxter, M.D.,* U. S. Army Surgical Research Unit, Fort Sam Houston, Tex.

No Toxic Effects

New Absorbable Material Proves Effective Hemostat

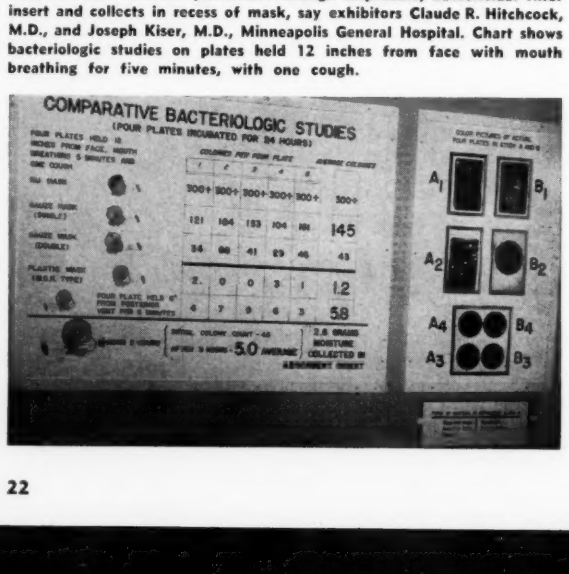
Preliminary experimental and clinical observations suggest that oxidized regenerated cellulose is a safe, effective absorbable hemostatic material. In no instance has a wound infection, toxic reaction or death been attributed to the material.

Oxidized regenerated cellulose is a synthetic fiber made by treating cotton with alkali and carbon disulfide, reducing it to a liquid which can be forced through spinnerets to form a viscose fiber. After further treatment, the filament is made soluble in weak alkalies, and readily absorbable with a minimum degree of reaction when implanted in body tissues.

The material was used clinically in two forms, a fine knitted mesh and a carded fiber form similar to absorbent cotton. It may be used in layers, as a packing or as a wad.

Observations in fifty consecutive cases covered procedures performed by several surgeons; patients ranged in age from two months to 77 years. The gauze-type form of the fiber was found to be well tolerated in liver biopsies of patients found at operation to have advanced malignancy, with prompt cessation of bleeding.

Bacteria-laden moisture penetrates through disposable, bactericidal filter insert and collects in recess of mask, say exhibitors Claude R. Hitchcock, M.D., and Joseph Kiser, M.D., Minneapolis General Hospital. Chart shows bacteriologic studies on plates held 12 inches from face with mouth breathing for five minutes, with one cough.



In autopsies on ten patients, performed one to 77 days postoperatively, the fabric could not be identified grossly in the longer term specimens, but small shreds of debris were seen microscopically.

Some of the ways in which the material was used clinically are liver biopsies; gall-bladder bed after cholecystectomy, packed and sutured into diaphragm and mediastinum, thoracotomy for carcinoma of lung; placed over aortotomy following open correction of subaortic stenosis.

There are two clinical applications in which the regenerated cellulose is particularly valuable. One of these is over large, oozing retropleural or retroperitoneal areas. The other is in the control of massive weeping sometimes resulting from fabric grafts used for vascular replacement. Heavy blood loss has been prevented by wrapping the graft with the cellulose material and compressing it gently. — *Alvin Lebendiger, M.D., George F. Gitlitz, M.D., Elliott S. Hurwitt, M.D., Geoffrey H. Lord, Ph.D., John Henderson, M.D.,* Montefiore Hospital, New York City.

Dissemination in Surgery

Alteration of Cancer Cells Reduces Chance of Implantation

The surgical treatment of malignant disease is frequently a failure due to dissemination of viable cancer cells either in the circulation to produce metastasis, or locally to produce wound recurrence.

Although the original theory held that dissemination occurs before operation and only becomes manifest in the postoperative period, there have been an increasing number of later reports suggesting that dissemination of viable cells may occur during surgery.

Efforts were made in research to alter cells of the primary tumor before detachment, so that cells disseminated in surgery would be so changed that natural host defenses would resist their implantation. Irradiation was used inasmuch as it is recognized as a means of altering cell growth.

The experimental animals were female mice, which were inoculated with a suspension of tumor cells. After two weeks, the 24 mice were divided into groups of six, one to act as control, and the others to receive varying degrees of irradiation.

Irradiation treatment interrupted the growth of the primary tumor up to 14 days. Following this delay, the tumors resumed growth and eventually killed all the animals.

The study showed that irradiation, while not significantly altering the growth of the primary tumor itself, does produce an apparent change in the cells of the tumor. This cellular change is sufficient to prevent growth of the majority of cells when they are surgically detached and artificially disseminated from the host tumor within 24 hours following treatment. — *Robert C. Hoye, M.D.,* and *Robert R. Smith, M.D.,* National Cancer Institute, Bethesda, Md.

Precipitated by Stress

Onset of Malignant Disease Linked to Personal Disaster

A large number of patients exhibiting clinical evidence of malignancy have been found to have suffered distressing or disastrous experiences shortly before onset of the disease. These experiences involved death of a close relative, loss of a strong emotional attachment, or disastrous experience in life's work. Neville Chamberlain, Robert Taft, and John Foster Dulles may be cited as examples. Each developed clinical malignancy shortly after a demoralizing experience.

A detailed life history was obtained by interview in 49 of 56 consecutive primary cases of cervical cancer. The patients ranged in age from 29 to 78, and radical hysterectomy and regional lymphadenectomy, as well as radiotherapy, had been employed as therapeutic measures.

Twenty-seven of the 49 women gave a history of a distressing experience preceding the disease. In 15, the event had occurred within a year of the onset of the malignancy, and in 12 cases, 12 to 30 months before onset. In all instances, the disturbance had been acute, and took the form of death or incurable illness of husband, child, or parent. Five patients suffered total loss of future security.

Material was reviewed to determine whether any specific feature in the patient's life history was reflected in response to therapy. Two groups emerged, the first (23 patients) had a miserable childhood, unhappy married life, and bleak future; the second (26 patients) were average, or happier, in each of the categories.

The patients with the miserable past and hopeless future have responded poorly to therapy. Their immediate death and recurrence rate is three times that of patients with a more cheerful past or anticipated future.

If these social factors are as important as they seem, treatment must be altered to deal with the underlying problem. In this group of patients, cancer may be only a symptom. In some, the stress that precipitated the onset has been reduced, and treatment offers some chance of success. In others, the bleak condition remains, and until it is relieved therapy is handicapped. — *Frank P. Paloucek, M.D., John B. Graham, M.D.,* Roswell Park Memorial Institute, Buffalo, N. Y.

Infections in Trauma

Prevention

Fastidious Hand Hygiene Imperative In Prevention of Surgeon-Caused Infection

The introduction of antibiotics can almost be called one of the greatest disasters of our time. Because of the carelessness induced by reliance on antibiotics, we have gone back two centuries to pre-Listerian hospital gangrene. Being admitted to a hospital represented calamity for the patient of that day; the death rate used to be 100 percent. We may rapidly be getting back to that era.

As new antibiotics are introduced, new resistant organisms follow. If the present trend of activity continues, it is impossible to see where this incongruity will end.

It is appalling how surgeons will find new words to disguise avoidable infection of wounds. Surgeons will infect wounds and yet find many reasons to excuse themselves: "the patient has diabetes"; "the patient is in the wrong age group"; "there is a relationship of infection to month of the year."

Many factors are important in wound infection — dust, floors, blankets, for example — but even with all these contributing factors, a huge majority of infections come from the skin of the operators' hands. Fastidious hand hygiene is imperative. The skin should never be allowed to become contaminated or infected.

No touch technics in operating should be encouraged (perhaps surgeons should operate once a week without gloves to see how often their hands are put in the wound unnecessarily). With 86 percent of gloves punctured during operation, it is imperative that sterilized instruments be used in the wound rather than the gloved fingers.

The surgeon must set standards of behavior for his assistants to follow. In England, Americans are admired tremendously for their no-touch technics in food handling and food packaging. If the food industry is so amenable to these technics, why cannot surgery be also? — *Sir Reginald Watson-Jones,* London Hospital and Robert Jones and Agnes Hunt Hospital, London, England.

Tetanus

Widespread Active Immunization Against Tetanus Urged

The tragedy of tetanus is that it could have been eradicated in 25 years with a program of immunization at a smaller cost than any other immunization program ever instituted.

The most important feature is prevention of the disease with widespread active immunization. It is the responsibility of surgeons as well as every other professional group to promote acceptance of such a program. The usual dose of 1,500 units is inadequate for minimal protection. The minimal dose should be 4,500 units, and this should *not* be scaled down according to the patient's weight.

Once tetanus has set in, treatment at its best is unsatisfactory. Wound care is imperative with adequate debridement a must. Antibiotics will have no effect on toxins already produced, but the organisms can be attached with antibiotic therapy, especially with penicillin.

Antitoxin should be given at the rate of 100,000 units equally divided between intramuscular and

(Continued on next page)

intravenous routes. Muscle relaxants and sedatives are indicated, but curare or succinylcholine leaves too narrow a margin for safe ventilation. Tracheostomy is indicated for all patients with tetanus; gastrostomy or feeding tubes may be necessary.

Good management of these patients and good supportive care have resulted in a steady decrease in mortality over the last 50 years. – *Keith Reemstma, M.D.,* assistant professor of surgery, Tulane University School of Medicine, New Orleans, La.

Gas Gangrene

Sudden Paleness, Delirium in Wound Grounds for Suspicion of Gangrene

Gas gangrene is more of a potential threat than an actual disease. From the production of gas gangrene in experimental animals, certain conclusions have been made. For one, the appearance of a wound is not an infallible guide to diagnosis. There may be no smell; the wound may bleed; the muscle may retract if pinched; there may be neither gas nor gangrene present; and yet the patient may die of gas gangrene of a wound.

Any time a wound is present and a patient suddenly becomes pale and delirious, the diagnosis should be considered. Standard vital signs and routine laboratory work are not very helpful in making the diagnosis. Gas gangrene may occur three to six hours after wounding, but more often occurs 12 to 24 hours afterward. If the patient is in generally poor shape after 24 hours, the diagnosis should be considered.

A high index of clinical suspicion is essential in treating wounded patients. If the wound shows nothing and the physician is suspicious, it is still necessary to establish the diagnosis. Smears and cultures can confirm it, but three days may be too long to wait for bacteriological diagnosis.

The fact that a wound grows clostridia is not too helpful in treating the patient; however, quantitative determinations of organisms present in a wound are helpful. If a swab from a suspected muscle tissue produced gram-positive rods on smear and if that swab is from the interior of a wound, rather than from a superficial pool of exudate or pus, one must suspect clostridia myositis until proved wrong.

Repeated smears are made over a period of hours to check on the increase in number of rods. It must be emphasized that the gram-positive rods are counted, not organisms.

Once the diagnosis is established, surgical excision of damaged muscle is the prime treatment and the prime preventative of gas gangrene. The patient will invariably die without treatment or if treatment is delayed 12 hours. A good debridement done within six hours of wounding gives him chance for survival.

There is always argument as to how much tissue must be removed. Sometimes it is impossible to remove all damaged tissue, but the patient still has a good chance for survival. Antitoxin and antibiotics are useful adjuncts to operative treatment.

Prophylactic antitoxin for gas gangrene is of no practical value in private life. Ultimately toxoid and active immunzation may have a place, especially in the military. Therapeutically, antitoxin is of limited value – depending on the potency of the antitoxin. The preferred route of administration is by infiltration directly into and around infected muscle.

Antitoxin is administered in two equal doses – one given intravenously before surgery. If surgery is complete, the remaining half is given intravenously; if surgery is not complete, the remaining half is put directly in the muscle.

The patient is loaded with tetracycline and penicillin. Every nook and cranny of the wound is filled with strong penicillin solution. In the laboratory animal penicillin has been found more effective when administered locally than systemically.

The treatment at best is unsatisfactory. Probably the best advice is that once the diagnosis is suspected, all methods should be used at once. – *Lt. Col. Douglas Lindsey, M.C., U.S.A.,* deputy director of medical research, Chemical Warfare Laboratories, Army Chemical Center, Maryland.

GI Tract

Abdominal Injuries More Common, More Difficult to Treat

Any good physician should be able to treat trauma of any part of the body well enough to sustain the patient until expert treatment arrives. Initial wound treatment is not stressed enough in medical education. There should be an absolute rule that any person entering medical school should have had Boy Scout training.

Abdominal injuries are more common and more difficult to treat than any others. Bacteria are already present; there are perfect media for growth, and infections are more serious. Because wounds heal from side to side, not end to end, a long incision in the abdomen to allow good exposure is justifiable.

The whole abdomen and its contents should be explored rapidly and with minimal handling of tissues and viscera. The stomach should be explored for holes or wounds in both anterior and posterior walls. The small intestine should be closely inspected along its entire length. If wounds are present, they should be sewed up for the time and resection postponed.

If the large gut is involved, it is exteriorized or drained with a proximal colostomy. If the spleen is damaged, it is removed; if the liver is damaged, the damaged or necrosed parts are removed.

A non-penetrating wound can cause peritonitis. A hard blow will cause disruption of the bowel or viscera, and the retroperitoneal hemorrhage that results is ideal for bacterial growth. Speedy surgery is necessary to prevent death.

If possible the patient should not be moved for 10 days. If he can be kept alive for those first 10 days, his chances for survival are excellent.—*Campbell McG. Gardner, M.D.,* assistant professor, McGill University Faculty of Medicine, Montreal, Que., Canada.

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(*Continued from page* 24)

Orthopedic Surgery

Value of Postoperative Antibiotics Studied

The value of routine administration of postoperative antibiotics has been generally accepted in connection with general surgery. In orthopedic surgery, however, the merits of such administration are being questioned.

A direct approach method was used in a study evaluating prophylactic antibiotic therapy. Procaine penicillin G (400,000 units) and dihydrostreptomycin (0.5 gm.) were used because of broad-spectrum coverage. Administration was intramuscular, every twelve hours for three to seven days postoperatively. A control group of elective operations on bones, joints, and tendons received no prophylactic antibiotic therapy.

Ruled out as exceptions within the study were those cases in which antibiotics were administered or withheld for other reasons. Among this group were open traumatic cases, patients with preoperative infections or histories of allergy to antibiotics, and patients receiving preoperative cortisone.

All types of postoperative complications were studied, including erythema, induration, stitch abscess, soft tissue abscess, and chronic draining sinus or osteomyelitis.

Of the 494 cases studied, 264 patients received postoperative antibiotics. Twenty-seven developed wound infections: an incidence of 10.2 percent. Of the 230 patients not receiving antibiotics, ten developed wound infections: an incidence of 4.3 percent.

The main pathogen in 80 percent of the infections was hemolytic staphylococcus aureus, coagulase positive. More than 60 percent were penicillin resistant. Eighty percent of the wound infections were found in cases involving more than 120 minutes of operating time.

It must be emphasized, however, that the treatment in this study was prophylactic, and not therapeutic. — *Melvin L. Olix, M.D., Thomas J. Klug, M.D., William S. Smith, M.D.,* Ohio State University College of Medicine, Columbus.

—For other news of the congress, see pp. 95-98, which contains a review of material presented at the postgraduate courses. A report on the panel discussion on the control of infections in hospitals will appear in the January issue.

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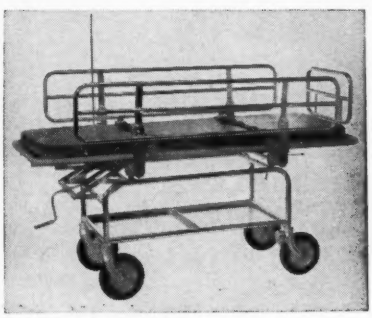

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Daily Prophylaxis Effective

Statewide System Administers To Rheumatic Fever Patients

The prevention of recurrences of rheumatic fever in the known rheumatic person by daily prophylactic doses of antibiotics has proven effective in a Connecticut experiment with this therapy.

Although there was much enthusiasm shown in medical literature for the value of sulfonamide and penicillin treatment in the prevention of streptococcal infections, it was apparent that such therapy was not widely accepted by community physicians generally. The two major deterrents to widespread use of the prophylactic drugs were the lack of information provided to the practicing physician, and the prohibitive cost of the recommended drug to the patient.

The first problem was taken care of by the Connecticut Heart Association on a community level. The second problem required the cooperation of the organized pharmaceutical profession and wholesale drug houses. The dosage and drug chosen, one 250,000 unit tablet of buffered penicillin G daily, was made available to the patient at an approximate cost of one dollar per month.

Under the system as now organized, a physician desiring prophylactic penicillin for a rheumatic patient submits an application to the state heart association, which then forwards to him a pad of four prescriptions coded for the specific patient. Coded stubs appended to the prescriptions are sent by the pharmacist to the wholesaler who then releases a bottle of the special penicillin to the retailer. The coded stubs are returned weekly by the wholesaler to the heart association office, where they are added to patient information already received.

The problem of delinquency in continuing the prophylaxis became a major one, and steps were taken to combat it. A procedure was instituted whereby the physician was notified when any of his patients were delinquent. It was found that patients who had died, moved to other states, or had otherwise been lost to the physician's followup constituted a significant part of this supposed delinquent group. Delinquency is still present, however, and plans are now being made to establish liaison between the delinquent patient and the heart association by way of the public health nurse.

To date, documentation of bona fide recurrences has been quite low. Of 36 cases investigated, 11 have been definite failures of the prescribed regimen; eight true recurrences appeared while the patient was delinquent in the prophylaxis, and in 17 cases, the reporting physician was unable to supply sufficient data upon which a valid decision could be based. — *Nicholas P. R. Spinelli, M. D.*, chairman, Rheumatic Fever Committee; *Horace A. Brown, M.P.H.*, executive director; *Nicholas J. Lavnikevich, M. P. H.*, program director; all associated with the Connecticut Heart Association, Hartford.

Discipline Also Important

Proper Ventilation Reduces Airborne Bacteria Count in O.R.

Until the invention of the air-centrifuge in 1933, scientific study of bacteria counts in the air was all but impossible. In 1941, the bacterial slit-sampler was developed, which could relate the time of appearance of contaminated particles in the air to events taking place in the room.

Slit-sampler use in many hospitals has resulted in the knowledge that the air in general operating rooms is loaded with bacteria. In a 1955 study, a chest surgery unit was investigated which had a high rate of Staphylococcus aureus infection. A change in the ventilation system was tried, and the slit-sampler confirmed the fact that the bacterial count was definitely reduced. Sepsis frequency dropped from 11 percent of operations to about 2 percent.

Before changing or replacing the ventilating system, efforts should be made to discover whether the present system can be made to do a proper job. In a situation where discipline is lax, the most elaborate system will not reduce the bacterial count as fast as haphazard technics will bring it up.

The surgeon should insist that no unsterilized blankets are brought into the operating room, that no person in the room is wearing street clothes or regular uniforms under gowns, and that no person enters or leaves the operating room during surgery.

(Continued on next page)

In a full-sized dummy operating room built for the purpose, conventional ventilating methods have been studied. Pressurizing of the room has been studied; air put into the room by the intake fans is slightly more than the volume removed by the exhaust fans. This system results in a strong outward draft when a door is opened, preventing contamination of the air from sources outside the room.

Three types of ventilation plants have been developed for the more difficult job of removing organisms liberated inside the room. The first introduces air at the top of the room so that it mixes with air already in the room, keeping bacterial count down by process of dilution. In the second type, clean air is introduced at the top, while contaminated air is removed at the bottom. The third aims a stream of clean air at the center of the room to prevent stagnation of contaminated air in the area immediately surrounding the patient. – *Robert Blowers, M.D.*, director, public health laboratory, Middlesbrough, Yorkshire, England.

Heart Ailments Costliest

Age, Diagnosis Influence Cost Of Complete Medical Care

The concept of complete medical service is a generally accepted one, but cost and quality are closely related. Research into the cost of providing such care involves the level of care to be aimed at, the number of facets of medical treatment occurring in a given program, and the true total cost per patient or patient group.

In research on comprehensive medical care to ambulant patients in a large metropolitan teaching clinic, the records of 668 patients were evaluated. Of this number, 108, or 16 percent paid nothing for services used. Nearly one-third of the patients paid less than $20 for the year. At the other extreme, 74 patients had costs of $100 or more, and two of these cases incurred costs of more than $300.

From records examined, it was determined that certain diagnostic groups accounted for the wide range of costs noted. Patients with heart disease, particularly the degenerative ones such as arteriosclerosis, tend both to longer periods of illness and more costly treatment. The same proportion of syphillitic as heart patients are under long-term care, but the cost picture is entirely different. Nearly half of the syphillitic patients have minor costs averaging less than $20.

There is a pattern of increasing cost with increasing age. Twenty-nine percent of all patients incur minor costs under $20, but 38 percent of the group under forty years of age fall into this category, compared to 25 percent of those 60 years and older. With women patients, the age-cost relationship is not clear cut, but of the 35 men who incurred costs of $100 or more, only one is under forty, 28 are sixty or over.

Another relationship emerging from the data is an inverse one between costs incurred and economic status of the patient. The poorer the patient, the higher the costs incurred. This result is based on the highest clinic fees and represents costs incurred, not fees paid. – *George G. Reader, M.D., Margaret Olencki, M. A.*, New York Hospital, Cornell Medical Center, New York City.

Danes Subsidize Local Groups

Home Care System Relieves Hospital Crowding, Aids Patient Recovery

When medical science was founded, the practice of medicine was a form of home care. Patients were treated in their homes, and hospitalization was a thing to be avoided as long as possible.

With the evolution of surgery and its many technical and specialized facets, this picture has changed. For practical economic reasons the vast amount of equipment and specalized medical skill available today have been centralized in the hospital, and hospitalization has become commonplace.

It is natural that areas with a shortage of medical personnel should favor concentration of the available doctors and nurses. However, in areas where there is no shortage of personnel or money, centralization may not be the most effective method. If the same good result obtainable from centralized hospital treatment can be had by transferring part of the treatment and nursing of the patient to his home, there is a distinct advantage in doing so.

In Denmark, 85 percent of the population are members of an insurance plan. The available hospitals–5.1 beds per thousand population – reached their fullest pressure, and in 1957 a system of home care was instituted.

Local authorities must provide for the nursing care system, and a public subsidy is made, varying according to whether the area is rural or urban. The size of each district is fixed, and the nurse must be state authorized.

The home nursing service works in close contact with the private physician, and the district nurse takes patients only upon the doctor's orders. Her short visits once or twice daily to each patient are taken up with actual nursing care: changing dressings, giving injections, etc. Public health work is not her domain; this is attended to by special public health nurses.

Certain examinations requiring special apparatus can be made at the nearest hospital by the regular staff. If hospitalization is necessary it is ordered, but as soon as feasible the patient is discharged to his home where treatment and nursing are continued by the family doctor and the district nurse.

This home care system revives something of the most valuable aspects of the medical and nursing professions – the close personal contact which medicine in its original form possessed in the meeting of doctor and patient. – *Eli Magnussen, R.N.*, chief, nursing section, National Health Service of Denmark, Copenhagen.

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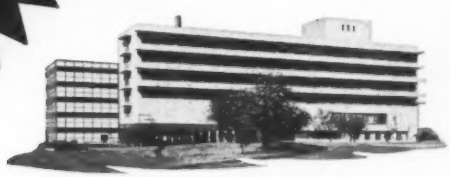

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American Heart Association

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Philadelphia's population took a temporary jump as more than 4,000 physicians, researchers, and lay leaders concerned with problems of heart disease gathered at Convention Hall to attend three days of scientific sessions and a two-day business meeting of the association's national assembly.

An operation to cure "dissecting aneurysm" of the aorta, a false blood passage inside the aorta wall which may cause death from internal bleeding, was described by *Dr. Michael E. DeBakey,* Baylor University College of Medicine, Houston.

Cutting out the affected aorta section and replacing it with a graft significantly altered the course of the disease in 48 persons and removed the threat of death by rupture in most instances. Because the patient's blood flow is interrupted for this operation, his body temperature must be lowered to reduce his oxygen need, or his blood circulation taken over by a heart-lung machine, Dr. DeBakey reported.

In another surgical report, *Dr. Conrad R. Lam,* Henry Ford Hospital, Detroit, told of 107 operations to correct an aortic valve with inborn or disease-caused damage. The valve was repaired by opening the heart for direct vision surgery. Although patients were cooled to interrupt circulation in some cases, the heart lung machine is favored for this procedure by Dr. Lam.

Open heart surgery to correct disease of the pulmonary valve, or that section of the heart just beneath it, was described by surgical groups from San Francisco and New York City.

Dr. Frank Gedbode, Stanford University School of Medicine, reported using a heart-lung machine for operations on this area for the past two years.

Dr. Vincent L. Gott, University of Minnesota Medical School, described an operation in which the heart may be temporarily stopped by chilling it to 62° F., allowing surgeons to operate on an immobile and dry heart while a heart-lung machine maintains circulation to the rest of the body.

This cooling method offers several advantages over the previously-used drug-induced heart stoppage, according to Dr. Gott. Because cold blood can be sent through the heart from time to time, muscle starvation can be prevented. Also, undesirable changes in heart chemistry are minimized and the heart can be stopped for a longer time than is considered safe with drugs.

Dr. Stacy B. Day, University of Minnesota, Minneapolis, outlined an operation which simulates conditions of the "blue baby" heart to relieve heart pain in adults suffering from coronary artery disease.

Blue babies are born with heart and circulatory defects which prevent their blood from receiving enough oxygen. They have, consequently, a highly developed coronary blood system which represents the body's effort to keep the heart working efficiently.

The severe pain occurring in the adult's coronary artery disease does not mean the blood lacks oxygen as such, but that not enough oxygen-carrying blood reaches the heart muscle due to narrowing of its blood vessel system.

The body's compensatory mechanism – as reflected in the "blue baby's" heart – was exploited in three persons incapacitated by severe heart pain by bringing some venous "blue blood" almost directly into the heart muscle.

This was done by tapping the pulmonary artery, through which de-oxygenated or venous blood returns from the right side of the heart to the lungs for fresh oxygen. Openings in this artery were joined to openings in the left side of the heart to provide a route for a small amount of venous blood.

This oxygen-poor blood, by raising the carbon dioxide content of the blood in the coronary arteries, stimulated non-diseased branches of the coronary network to enlarge and spurred the growth of new collateral blood vessels within the heart. Both the amount and distribution of total blood flow through the ailing muscle improved, Dr. Day believes.

In all three cases, there was dramatic and sustained relief of pain, improvement in health, and early return to gainful employment.

Various phases of the controversial cholesterol-heart disease question were discussed at the session.

Dr. Louis E. Schaefer, the Bronx, told of a study correlating heredity, rather than environment, with blood cholesterol levels.

Cholesterol levels were found to be strikingly similar in 2,500 persons living in "highly urban" Manhattan and "semi-rural" Staten Island, thus negating an environmental determinant.

But when individual families were studied, correlations between mother and father were zero, while strongly positive and statistically significant correlations existed between the levels of father-children, mother-children, and sibling-sibling.

Dr. William Hollander, Boston, reported on tests with triparanol, a new drug which resembles a synthetic sex hormone but does not have feminizing effects when given to men. Triparanol apparently blocks the body's manufacture of cholesterol at one stage in the processes through which it is synthesized.

Over a period of seven months, it was given to 50 subjects with and without artery disease and brought a 40 percent average cholesterol level drop.

Another cholesterol inhibitor, benzmalecene, when

given to three people with elevated blood cholesterol levels and eight with normal levels, promptly produced a striking drop in all, according to *Dr. Bernard A. Sachs,* New York City. Stomach and intestinal upsets were so frequent, however, that prolonged testing was ruled out.

A Mayo Clinic team headed by *Dr. Kenneth G. Berge* reported that niacin, when given in doses larger than the body requires for normal nutrition, brought a significant, sustained, and reproducible decrease in blood cholesterol in a majority of 63 persons studied for periods up to three and a half years. It is not recommended for widespread use, however since it produces undesirable side effects when given in the large doses needed.

Maintaining a diet of 2,000 to 2,700 calories daily, with from 30-33 percent fats, brought a blood cholesterol drop and only a pound or two of weight loss in 97 men studied over a six month period. *Drs. Seymour H. Rinzler, Morton Archer,* and *Norman Jolliffee,* New York City Health Department, said most reduction occurred in the first three months, but could be sustained for at least a year if subjects continued to follow this diet.

Evidence that adrenalin and a closely related hormone, noradrenalin, may be involved in the high incidence of heart disease found among men with aggressive behavior patterns was offered by *Dr. Meyer Friedman,* San Francisco.

Studies indicate that glands of these personality types produce more adrenalin and noradrenalin during the working day than do glands of easy-going men. During sleep, however, hormone secretions were about the same. Excessive production of these two hormones suggests a mechanism through which the personality factor may operate, suggests Dr. Friedman.

Individuals can vary greatly in the way their blood levels of cholesterol respond to stress, according to *Dr. John H. Peterson,* Loma Linda, Calif. Some have unstable patterns and may react more harmfully than others.

In studies on 44 healthy medical students, he found five whose blood cholesterol showed extreme variability from day to day. When these five were subjected to a mildly stressful experience, their blood cholesterol rose greatly, while five others subjected to the same stress showed relatively little change.

In another area, *Dr. Kenneth M. Moser,* Georgetown University, Washington, reported that a treatment combining anticoagulants and clot dissolvers can provide quicker relief for patients with leg veins impaired by blood clots than can anticoagulants alone.

In a study of 62 persons with acute thrombophlebitis, 30 were treated with bed rest and anticoagulants, and 32 were given a clot-dissolver, fibrinolysin or plasmin, in addition to anticoagulants. When outcomes were compared, the combination therapy seemed to clear veins more rapidly and with fewer complications, although an eventual return to normal was the general rule for both.

Barbiturates, if taken before anticoagulants, cause the anti-clogging drugs to lose their effect, observed *Dr. Murray Weiner,* New York City. Studies in both animals and patients showed that barbiturates prevent the anticoagulants from being absorbed. When barbiturates are given five hours after anticoagulants, this inhibiting effect was not seen.

Dr. Herbert S. Sise, Boston, found little risk in interrupting long-term anticoagulant treatment in order to extract teeth or enable patients to undergo surgery. He noted, however, that if excessive bleeding requires withdrawal of anticoagulants, the patient's outlook is grave. In a group of patients who had been taken off the drugs because of bleeding, seven died of heart disease and four developed other complications within one day to three months.

Dr. Alvin R. Feinstein, Irving House After-Care Clinic, New York, claimed that annual examinations of 168 persons for 21 years following a rheumatic fever attack indicate that activity restrictions neither improves nor worsens the conditions, but may produce more emotional or psychological problems.

Dr. Gene H. Stollerman, Chicago, reported that as people who have had rheumatic fever get older, they appear less susceptible to repeat attacks and streptococcal infections, which are believed to trigger both first and repeat attacks.

Measures to prevent strep infections were discontinued in 285 adolescents and adults who had been free of rheumatic fever for at least five years. This group was then checked for new strep infections at regular intervals. The frequency with which infections and subsequent rheumatic fever attacks occurred was compared with the frequency in children receiving anti-strep prophylaxis because they once had had rheumatic fever. Recurrence rates were lower among the adolescents and adults.

A new, fatal condition marked by an abnormal accumulation of lactic acid was described by *Dr. William E. Huckabee,* Boston. So far, he said, it has only been observed in a small number of patients, all of who were extremely ill and eventually died of this condition.

The condition is associated with chemical changes of fatigue but is of extreme severity and much longer duration than acidotic changes due to fatigue.

The patients were originally noted to have acidosis. Laboratory tests revealed the acid responsible as lactic acid, also called the fatigue acid because it is produced by working muscles and accumulates when an individual tires—but only to a limited extent and for brief periods of time.

Although patients with "lactic acidosis" were in bed with no occasion for exercise, the lactic acid piled up in great amounts and lasted for long periods of time.

The basic cause of this "fatigue" ending in death could not be determined, but Dr. Huckabee said studies suggested the possibility of a widespread failure of tissue oxygen supply.

Lester Tuck (seated, r.), administrator, Singing River Hospital, Pascagoula and outgoing president, Mississippi Hospital Association, served as master of ceremonies during meetings of the Mississippi Association of Hospital Governing Boards. Pictured with him are (seated), Rev. James Parker, chaplain, Mississippi Baptist Hospital, Jackson, and Major Eugene Hiller, manager, VA Center, Biloxi division. Standing are W. K. Anderson, Clarksdale, association president, and C. C. Whittington, Greenwood, former president.

Mississippi Hospital Association

. . . Biloxi, October 8-9

Legislation that would alleviate the financial burden imposed by the care of indigent patients was one of several areas considered by delegates to the 28th annual convention of the Mississippi Hospital Association, held recently at Biloxi.

The hospital group went on record as favoring an increase in the present $6.00 per patient per day rate paid by the state, to an amount which would be a percentage of actual cost. A maximum of $17.25 per patient per day was asked, representing 75 percent of the actual estimated cost.

S. Earl Grimes, Jr., administrator, New Biloxi Hospital and chairman of the association's council on government relations, pointed out the inequities imposed on paying patients and hospitals by the staggering charity load. Over 25,000 indigent patients were cared for in 1958, totalling 98,000 days, at a loss to the hospitals of $1,700,000.

Following their theme, "Advancement through Knowledge," the delegates heard *Ray E. Brown*, superintendent, University of Chicago Clinics, and *James R. Felts, Jr.*, assistant director, Hospital and Orphans Sections, Duke Endowment, Charlotte, N. C., speaking on hospital management. Nursing facilities, state and national, were discussed by David B. Wilson, M.D., administrator, University Hospital, Jackson, and Fr. John Flanagan, S.J., executive director, Catholic Hospital Association of America.

New officers of the Mississippi association are D. A. Lingle, administrator, Jones County Community Hospital, Laurel, president; Reed B. Hogan, administrator, Coahoma County Hospital, Clarksdale, president-elect; Paul J. Pryor, administrator, Mississippi Baptist Hospital, Jackson, treasurer.

Several other organizations met concurrently with the hospital association. Other groups included the Mississippi Association of Hospital Governing Boards, Mississippi Hospital and Medical Service, Mississippi Catholic Hospital Association, and the state chapter, American Association of Hospital Accountants.

Above: Officers elected by the Mississippi Association of Hospital Governing Boards include (l. to r.) D. U. Maddox, Laurel, member of executive committee; S. B. Wise, Jonestown, secretary-treasurer; and Charles W. Flynn, executive director.

Right: Program personalities at the Mississippi Hospital Association conclave were Marion Loftin, Ph.D., professor of sociology, Mississippi State College, Columbus; David B. Wilson, M.D., administrator, University Hospital, Jackson; Fr. John Flanagan, S.J., executive director, Catholic Hospital Association of America, St. Louis, Mo.; Jay H. Hedgepeth, attorney, Jackson; and Preston Hill, administrator, Lucius Olen Crosby Memorial Hospital, Picayune.

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1. Adams, Ralph, M. D. : Med. Times, 86:1119-1127 (Sept.) 1958.

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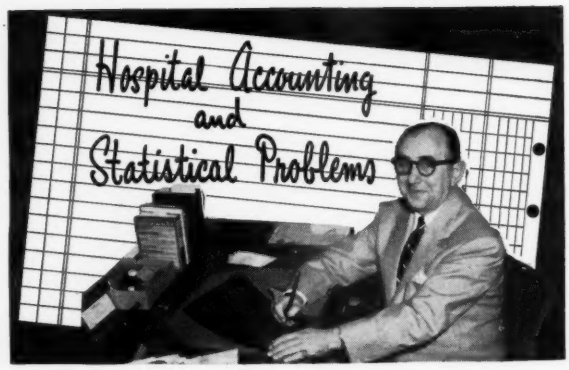

By David H. Tarlow, C.P.A.

Senior Partner, D. H. Tarlow & Co.

Hospital Accountants and Auditors, New York City

O. Our accounting office seems to be bogged down in the detail of posting charges to the patient account cards. About all we can do is prove out our daily postings; the question of proving out details with the control account is regularly deferred because of the lack of time. The charges giving us the greatest concern are those from the laboratory, and the drug charges emanating from the floor or nurses' station. We have a National Cash Register window machine for patients' accounts and last year gave 40,000 patient days' care. Can you give us any suggestions to decrease the paper work so that our controls may be kept up to date?

A. The following procedures are offered for your consideration:

1) Establish a routine charge upon admission of medical, surgical and pediatric cases for a complete blood count, and urinalysis. (Obstetrical patients appear to have this service performed by their private physicians during the pre-natal care period.)

   This routine would eliminate two charge tickets for each patient admitted. Some hospitals have established a flat rate for all laboratory work with an average of one day's room and board used as a base for charging. This would require some research on your part and a conference with the pathologist, particularly if he is working on a percentage arrangement.

2) Charge all drugs in bulk when such are requisitioned to the nurses' station from the pharmacy for a patient. Upon the patient's discharge, a credit may be issued for the unused balance if an appreciable amount is left. (This could be reviewed with your administrator and medical staff.) The drug charge tickets should be reduced considerably by this procedure.

3) Some hospitals have developed a carbon form for nurses' daily notes which provides a duplicate recording of all drugs administered to patients without the necessity of re-writing by the nurse in charge. The tear sheet is sent to the accounting office each day for a single recording of drugs and medications. This procedure eliminates the need to sort and collate the drug charge tickets and reduces nurses' clerical work.

O. In the September issue of HOSPITAL TOPICS you described a routine for determination of meal costs served in the cafeteria. We believe you will be interested in the following procedure which we use at our hospital.

It is necessary for us to use our cafeteria for all meals in the hospital except those served to patients. In the absence of a coffee shop the cafeteria is available to doctors, nurses, employees and visitors during mealtimes and for coffee breaks. The registers on our cash register are coded to indicate taxable meals, full meals, part meals and coffee break refreshment. The "full meals" represent all sales per person in excess of fifty cents. "Part meals" are individual sales of less than fifty cents.

To compute the equivalent of the number of full meals served, we divide the number of full meals into the amount of cash received to obtain the average price of such meals. This average is then divided into the amount of cash received for part meals to obtain the equivalent of full meals. The total number of meals, therefore, is the sum of the taxable meals plus the full meals added to the equivalent of full meals in the part meal register. Coffee break refreshments are ignored in the computation of number of meals served.

A. The question of full or part meals has always presented a problem in reporting statistics from the dietary department to the administration. It was often found that variations in weather caused a reduction of food consumed in the cafeteria. Since a cost analysis should use as its basis exact statistics wherever possible, the dietitians and administrators consulted were of the opinion that an exact allocation of raw food would be preferable to an estimated weighting. Since we are essentially concerned with cost apportionment and not only a compilation of statistical units, you can understand the position we recommend.

Q. Our ladies' auxiliary comprises groups in neighboring towns who work for the benefit of the hospital. We have requested that they make their grants to us in the form of cash, but they make purchases of needed items and donate the equipment or linens to the hospital. Our administrator does not want to make an issue of this matter and suggests that I make journal entries to cover these transactions. Unfortunately, we do not have access to the ladies auxiliaries' records and do not have the invoices to support such journal entries. What procedure do you recommend?

A. I would ask for a copy of the invoices and prepare the following journal entry:

Debit: Equipment
Linen
Credit: Ladies' Auxiliary
To record the following gifts in kind.

(Describe all items in detail also listing vendor and date purchased.)

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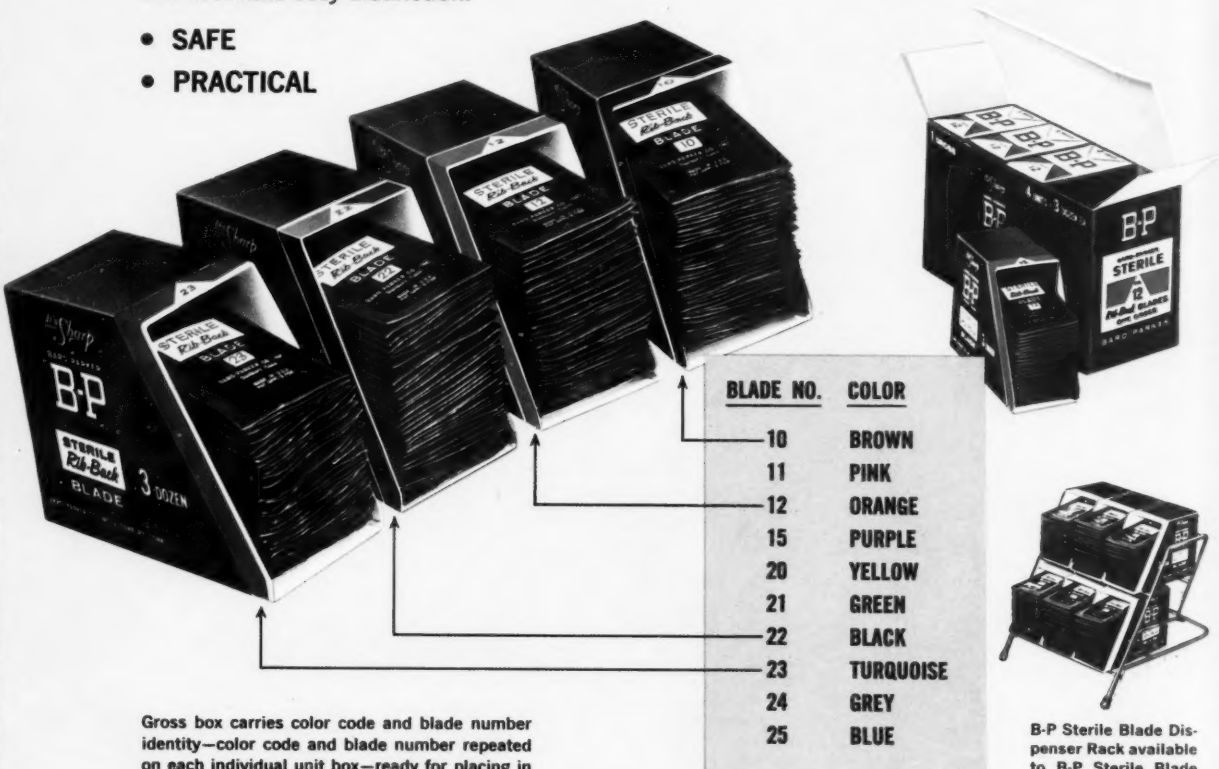

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Consultant's Corner

By John G. Steinle

Q. Our 65-bed hospital has surgical tissue processed and interpreted by a qualified pathologist of a nearby larger hospital. Tissue reports and slides are returned to us. How should we code, index and file the slides and the reports?

A. It is assumed that the pathologist in the larger hospital is already using a coding, filing and cross-indexing system acceptable to the Joint Commission on Hospital Accreditation. Thus, the small hospital should adopt the same procedure, following the advice of the correspondent pathologist in setting it up.

Q. The Board of Trustees of our hospital believes that only local firms should be used, not only to provide services and supplies, but also as contractors for capital expansion. Do you have any comments?

A. This is provincialism at its worst! The hospital is the responsibility of the total community and should be supported as such, not simply for the return that the local businessmen can get from it. The responsibility of the trustees is to the entire community. Consequently the trustees must get the best possible price. This may require going outside of the community. Since the responsibility is to the whole community and not just a segment – those who potentially can do business with the hospital – prices should be obtained from the widest possible area to encourage competition.

Q. We are getting pressure to appoint a representative of organized labor on our Board. Do you have any suggestions?

A. Board members should be appointed first because of their broad interest in the hospital and the community it serves. Members should never be appointed to the Board of Trustees simply because of their very special interest, particularly where that interest may be in conflict with that of the hospital. It would be a sad situation if trustees were selected and appointed because of their special interests. Obviously they would quickly negate each other so that little or no business could be transacted at the meetings.

There may be some excellent labor people who have the interest of the hospital and the community foremost in their thoughts. These people may make excellent trustees and should not be discriminated against because of their labor identification.

Some hospitals have an excellent method for screening potential trustees. They have associate trustees who do not attend meetings of the trustees but are used in an advisory capacity in specific areas such as buildings and ground, finance, personnel and nursing. Persons assigned to task forces give the trustees an opportunity to evaluate the interest, ability, and capacity to work with others, of the potential trustee. If a hospital has such a mechanism this affords an excellent opportunity to take the measure of the labor leader proposed for trusteeship.

Q. We are considering changing the by-laws of the medical staff. The central governing body will be the Medical Board. This will be composed of the chiefs of all clinical division and the president and vice-president of the staff. Do you see a problem in having the selection of the chiefs of the clinical services made the responsibility of the Medical Board?

A. Yes! This can create a clique that will completely dominate the hospital. Also, the appointment of Chiefs of Services is the responsibility of the Board of Trustees.

Traditionally, chiefs are recommended by the attendings of the particular service concerned. If this selection is made by persons in other services it will be made by those not completely familiar with the work of all the potentials. It will also probably cause a lowering in the morale of the departments because the attendings will be deprived of much of their responsibility in self-government. In other words, how can the attendings be held responsible for the operation of a department when their traditional authority in regard to recommendation of chiefs is by-passed in this manner?

Q. Do you believe that the annual financial report of hospitals should be made public?

A. Absolutely yes. The voluntary hospital is a quasi public institution. The public is the stockholder and as such is entitled to an annual statement. The worst possible public relations is for the hospital to refuse to divulge financial information and make it freely available. An attitude of secrecy immediately makes the institution suspect. The nonprofit status of the hospital makes it a special object of public interest.

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Ball Memorial Hospital

. . . . . Its 22-bed psychiatric unit is paid for, self-supporting, and discharges 76 percent of its patients back home

By Ellen L. Davis

● In 1951, Ball Memorial Hospital, in Muncie, Ind., had an assortment of troubles. Some of them were old problems—such as limitations of a 225-bed institution in a highly industrialized community with a population topping 58,000, and growing. One of them was new—a strike which started in May in the nurses' aide section, where many of the women were married to union men, and proportionately receptive to a CIO attempt to organize them.

It might have succeeded, too, except for two things. The community, being largely pro-labor, was either actively supporting the striking workers, or at least giving them tacit encouragement, when the workers made the mistake of trying to discredit the volunteer workers who were pitching in to help keep things going at the hospital. Not at all discouraged, but very angry, the volunteers continued on about their business, asking neither recognition nor gratitude—and suddenly found themselves bathed in both as the public fell in beside them in spirit.

The wife of the labor leader most involved in the strike capped the climax by requiring hospitalization herself, which in turn made it more or less mandatory that her husband cross the picket line to visit her. Picketing stopped in October. No negotiations were ever entered into, the strike was never settled; it just went quietly away.

On July 1, 1952, Walter G. Ebert (TOPICS' *Personality of the Month)* became administrator of Ball Memorial, following two years as administrator of the Marietta (Ohio) Memorial Hospital. Prior to that time, he had had 20 years' experience in the U. S. Navy, retiring voluntarily in 1950 with the rank of rear admiral.

As commander of the U. S. Submarine SCAMP through six successful war patrols in World War II, Mr. Ebert was accustomed to meeting, and swamping, resistance. First objective on the agenda at Ball Memorial was a fund-raising campaign, with a $1,700,000 goal. But never was a "Now hear this" approach less needed. Probably better acquainted with their hospital and its needs by virtue of the interest and talk generated by the strike—and with erstwhile strikers proudly prominent in the ranks of the doorbell ringers—the community exceeded its goal by $1,000,000.

"We simply tore up the preliminary plans," said Mr. Ebert, "and had new ones drawn up to double the hospital to 450 beds."

Going back to 1951, another of the old problems confronting Ball Memorial was the physical and psychological state of its psychiatric "facilities." These consisted of four detention rooms, literally holes-in-the-wall, located immediately adjacent to the emer-

Nursing personnel are an intimate part of the daily lives of the patients, sharing their meals and recreational activities. They also share the difficult times, and the quiet times, when patients begin to emerge from a depressive state and seek them out for guidance and "someone to talk to." Nurses and aides are required to remain on the unit from the time they sign in till they go off. It is a rule that has never needed to be enforced; the personnel regard it as a privilege, not a requirement.

gency room. The doors were kept locked at all times for the safety of the patients and staff; there was very little that could be done to keep the aggressive, deeply disturbed patients from taking up their stand at the barred windows for the sole purpose of screaming their manic fury out to passersby, and, worse, to gravely ill and injured persons being brought into emergency in extreme pain, fright, and shock.

"It was," said Mr. Ebert, "an intolerable situation. With the state institution 50 miles away at Richmond, and the process of legal committment a time-consuming one, the family suddenly faced with an emotional or mental breakdown in one of its members had three choices: to try to care for him at home, which was often an open invitation to tragic consequences; send him to jail; or bring him to the hospital. At that point in our development, we were only too sorely aware that the third choice had very little edge on the other two.

"The idea for a psychiatric unit in the hospital had been growing in our minds for some time. We certainly had the need, which could only increase, and we were fortunate in having a highly competent psychiatrist in town on whom we could count for help. We studied units in a number of other hospitals, and by 1955 we felt we had just about everything we needed to get started—except money."

With the campaign of three years previous so dramatically oversubscribed, the hospital set its second campaign goal, specially earmarked for a psychiatric unit, at $935,000, and geared itself for a diligent scraping of the bottom of the financial barrel. But again the community showed its heels to the goal as it went on to chalk up a total of $1,235,000, with the help of a $156,700 grant from the Ford Foundation. It was obvious that the community was as eager as the hospital to blot out the memory of those barred windows.

The 22-bed psychiatric unit, located on the seventh and top floor of the hospital, opened July 1, 1957. Admission, which is strictly voluntary, must be by the patient's own doctor, who is required to be on the staff of the hospital. If the patient cannot name such a doctor, he is assigned one.

Admission is just as fast as the patient can get from his home to the hospital, eliminating any dangerous delay in getting him out of the environment that caused the breakdown. If the case is an emergency, admittance is through the emergency room; otherwise the patient is admitted directly to the seventh floor.

Following admission, the patient may continue under the care of his physician (this happens only rarely), or he is referred to either Marvin Greiber, M.D., chief of the psychiatric unit, or his colleague, Russell Mathewson, M.D., who make every attempt to keep the family doctor in the picture throughout the course of treatment. Physical and psychiatric examination and consultation result in a planned program for the patient, who is oriented by the head

(*Continued on next page*)

The patient at the left looks expectant and hopeful following a talk with chief psychiatrist Marvin Greiber, M.D., about the possibility of going home for the weekend. Before making his decision, Dr. Greiber, right, checks the record with a nurse. The decision, "okay."

The boy on the left has just made a good return across the ping pong net. This game, along with the library, TV, tape recorder, and crafts, is a chief activity. The patient on the right is giving her husband some last-minute instructions as he leaves after visiting hours. She will shortly be back home to see to things herself.

BALL MEMORIAL continued

nurse as to policies, routines, privileges, and limitations from the standpoint of his own safety and recovery.

Any type of patient is admitted, and a typical recent month shows the following: alcoholism, 2; possible schizophrenic, possible brain lesion, 1; depression, 3; schizophrenic, 3; postpartum psychosis, 1; manic depressive with suicidal tendencies, 1; Demerol addiction, 1; psychoneurosis (anxiety), 1; chronic schizophrenic with diabetes mellitus, 1; overdose of tranquilizers, 1; anxiety, 2; depressive psychosis, 1; involutional reaction, 1; involutional depression, 1; agitated depression, 1; confused, diabetic, 1.

The only psychiatric unit in a county of 100,000, Ball Memorial not only covers its own county of Delaware, but draws 25 percent of its patients from surrounding counties.

In 1958, 314 patients were discharged from the psychiatric unit. Of these, 12 were committed to state institutions; 28 were readmissions; and 36 were referred to the LaRue D. Carter Memorial Hospital diagnostic unit in Indianapolis, where they stay for 60 days and work with psychiatrists and social workers to map out a future as compatible as possible with their emotional and mental needs and abilities. The remainder were returned to their own homes.

The community table is also handy for nurses and aides with a lot of paperwork to handle. Though patients are not, of course, permitted to see patient charts, they like to sit in on things of a general nature. During the evening, set with bowls of fruit and cookies and the electric corn popper, it is a favorite spot for TV viewers and snackers.

The average stay at Ball Memorial is less than 20 days, with three months as maximum. Most of the patients are in the depressive group, and relapses do occur—"and we fully anticipate them," said Dr. Greiber—when the patient curtails his stay because of financial pressure, or because the family, impressed with his outward well-being, backs up his request to go home.

A flat rate of $16* per day is charged for all types of accommodations. The charges include room and board, and nursing care. Insulin is seldom used, according to Dr. Greiber, because the procedure demands more personnel than the benefits warrant. The hospital supplies such accessories as restraint for shock treatment, but the psychiatrists use their own equipment, which helps keep the costs down. Additional charges are made by the physician for specific therapies, such as electric stimulation and psychotherapy.

The patient who is seriously disturbed on admission is put in one of four closed rooms. Restraints are never used on the unit, and though a few patients have accomplished the Herculean task of ripping the baseboards from the walls with their bare hands, none has succeeded in injuring himself or anyone else. Window screens (no bars) are of high-tensile steel which cannot be ripped or cut, though a few persistent occupants keep maintenance busy smoothing out a variety of dents.

Windows are opened and closed by a removable crank, which the nurse brings into the room with her when she adjusts the ventilation. The connecting

*The daily rate was raised to $17.50 as of July 1, 1959, because of general salary increases. However, the old rate is quoted because all costs discussed in this article are based on the fiscal year 1958, when it was in effect.

toilet and shower is locked from the outside; both facilities are of the push-button type, and both shower and water temperature are controlled from within a locked box to which the nurse retains the key. A porthole in the door is made of high tensile (bullet proof) glass, and can be exposed only from the outside.

All rooms are equipped with an intercom system, so that the disturbed patient can make his needs known to the nurse, who also tunes in to check on his emotional state from time to time. If patient behavior is not aggressive nor violent, the door is not locked. This psychological assist, together with the reassuring voice of the nurse in moments of special stress, is usually enough to make the patient accept his period of isolation, even though it may be physically possible for him to leave the room.

As a rule, a short period in isolation is sufficient to enable the patient to be moved to a semi-private room in the open area, where he becomes part of a group, and takes his first decisive steps toward rejoining the society that only a short time ago he turned away from in bitterness, fear, frustration, or utter defeat.

As the patients improve and stabilize still further in the atmosphere of group therapy, they are permitted to go to the hospital lobby snack bar for such everyday diversions as buying stamps or shaving cream or lipstick, or just to have a "coke" or a cup of coffee, and so are eased still further into a normal environment.

The psychiatrists also encourage, when feasible, trips downtown to the beauty shop and stores, and some patients are permitted to go home on weekends. Trial back in the home situation over weekends is one great advantage of having a psychiatric unit in the community. Physicians can test the situation back and forth, and evaluate it as the treatment progresses. This amounts almost to treating the patients as outpatients, while still retaining the authority and ability to remove them immediately from the irritating surroundings that caused the original illness should these again become intolerable.

The seventh floor at Ball Memorial is called an "open closed" unit. The doors to the corridor and elevators are kept locked—not to keep the patients in, but to keep unwanted visitors out, according to Dr. Greiber.

"In a general hospital of this size," he said, "you're bound to have curiosity-seekers. We would be deluding ourselves if we were to believe that all our citizens have a sympathetic understanding—in many cases, any understanding at all—of mental illness; and, unfortunately, those with the least comprehension seem to possess the most morbid curiosity. Another angle we cannot afford to overlook is that open doors would require us to double our personnel.

"I can say, though, that the level of understanding in this community has increased enormously since the opening of the psychiatric unit, and especially since we have had some leading citizens as patients. Families and other visitors accept the unit as part of the hospital, which relieves and often erases the traditional stigma. And, far from having to be encouraged to visit, families have been so eager that we had to curtail visiting hours, which are now from 7:30 to 8:30 p.m. weekdays, and one hour in the afternoon on weekends. These visitors play a large part in the morale and eventual recovery of our patients.

"Patients themselves, many of them carrying the additional burden of the old concept of mental illness when they come in, are literally surprised into their first reachings for recovery by the new concept they find here.

"The atmosphere itself, one of relaxed, unobtrusive group therapy and 'family living' helps to alleviate tensions and anxieties, and we notice a marked change in most of our patients in a matter of hours. Confinement is a terrifying thought to most of us, and patients' relief at the amount of freedom they have initially, or will have as they go along, has a very considerable therapeutic value.

"And speaking of therapeutic tools," Dr. Greiber continued, "the kindness, understanding, and interest on the part of our staff is one of the most valuable we possess. It is not too much to say that we could not function without it."

Electric stimulation therapy, preceded by intravenous pentothal and anectine is frequently used for treatment of psychoses, particularly of the depressive type. There is one treatment room with three cots, curtain-enclosed, which allows three patients to be treated and observed simultaneously while maintaining a sense of privacy.

A psychiatric committee appointed by the hospital staff formulates policies, and is responsible for the operation of the unit. This committee, made up of two psychiatrists and three general practitioners, meets monthly with the director of nursing services of the hospital and the head nurse and assistant head nurse of the psychiatric unit. They discuss individual cases and current problems, and draw up necessary regulations. The family doctor is brought into the picture as much as possible. Dr. Greiber frequently sees the husband or wife, or other interested relatives at night after visiting hours; he discusses the patient's situation, what the relative may expect, and how he can best contribute to a sustained recovery.

"Putting it in writing" is a basic philosophy, and a letter distributed to the patient's family is typical of the cooperative approach used. The letter reads, in part: "Your visits are likely to be quite important to the patient, and may be of great help. Come as often as you and the patient feel comfortable in doing so, and try to be as relaxed and natural as you can. Talk about anything you and the patient feel comfortable in talking about, and in general, do not force subjects, pretend, or lie. If possible, try to have the patient avoid important decisions while here.

"Usually, only the immediate members of the family are allowed to visit, and two per patient at any one time. Sometimes, when a patient is upset, or does not wish to have visitors, we think that visits should

(*Continued on next page*)

Reading and writing occupy part of the average patient's day. Outgoing mail is censored for material which, seen from a disturbed person's view, might be misleading and upsetting to the family. Current books and magazines are on open shelves; tape recorded music is under the supervision of a nurse, to avoid competition between a soothing sonata and a rambunctious TV western.

BALL MEMORIAL continued

be temporarily postponed, and we hope that you will understand.

"The usual hospital gifts, such as flowers and candy, are often unsuitable when people are feeling anxious, depressed, or upset. Amusing games, puzzles, books, or hometown newspapers, or cakes or cookies which can be shared with others, are often more appreciated. The best gift you can give the patient is yourself: your patience, understanding and cooperation.

"Patients receive mail without interference, but outgoing mail is censored by the nurse to avoid objectionable contents. Likewise, patients are not allowed to use the telephone except under very special circumstances and with the specific permission of the doctor."

There is no over-all pattern in the unit, since it's small enough to be flexible and adjust to individual needs. It is basically, however, a group atmosphere, in which the patients eat together, work together, play together, and get well together. They share toilet facilities, and such recreational facilities as ping pong, reading material, and television. There is also a tape recorder for music therapy, which is used under the guidance of a nurse.

Patients set the table for their family-style meals; meals are very rarely served in the patient's room. They make their own beds, which are dormitory style and have different colored bedspreads. They wear their own clothes, of their own choosing, and have facilities for mending, washing, and ironing. (On the day TOPICS visited, we held one end of a tape measure while it was determined if a new clothes drier and a couple of players in pursuit of a ping pong ball could be expected to be compatible in the same room.)

"There is no follow-up, as such, on the part of the hospital," said Mr. Ebert. "In a hospital this size, we just don't have the facilities, such as the clinics operated by the larger cities. When the patient leaves the psychiatric unit, his private physician, who has been closely in touch all along, takes over. We do have a service program for indigent patients, but practically no one takes advantage of it. The heartening fact is that the physician is by this time so engrossed in the progress of the patient that he can't let go, whether or not the patient can pay his fee.

"Occupational therapy," continued Mr. Ebert, "is on a rather piecemeal basis. We're not too unhappy about this because we do try to avoid regimentation of the patients, and we never lack for someone to help out. Most of our 'therapists' come from among the 6,000 students at Ball State Teachers College right down the street, which is the second largest such college in the nation, and a very progressive one.

"We are in the market for a full-time occupational therapist, however. We find the patients especially responsive to painting and crafts, and while we would want to keep it on a casual basis, we are aware of the value of having the same trained person in charge on a continuing basis.

"We have never had any trouble getting personnel for the psychiatric unit, even though the aides are paid the same salary as those serving elsewhere in the hospital, and they have considerably less freedom. Of course, they get their meals, too, but the thing they seem to get the most of is satisfaction."

The latter comment was borne out by an aide, who said, "I wouldn't work anywhere but seventh. It makes me so mad when I hear one of the aides downstairs make a remark, which I guess is supposed to be funny, about 'Why don't you go up to seventh; you'd fit right in up there.' Then they get sent up on an errand or something, and their eyes nearly pop out, because what they see isn't at all what they expected."

Both nurses and aides are required to stay on the floor from the time they report on duty until the time they go off. They literally live with the patients, sharing their meals, problems, and hopes. This is a hospital rule, but it is a rule that has never had to be enforced.

The nurses' station, immediately adjacent to the living room, and nearly close enough for the nurse to reach out and touch a patient sitting at the community dining table, is compact and highly efficient.

The drug cabinet, its door flush with the wall, flashes a red signal and sounds a buzzer immediately it is unlocked. On the opposite wall are the openings to the pneumatic tubes, into which are dropped all dietary notices, nourishment lists, marked menus, and requisitions for drugs. Narcotics that must be signed for, or are needed immediately, are delivered promptly by the incoming tube.

The pneumatic tube system, installed at a cost of $50,000 and in operation throughout the hospital, turns in a performance hardly short of sensational in saving time and personnel formerly engaged in the endless trips required to service a hospital. At its peak period of about four hours, the system handles more than 600 "errands." Anything that will fit inside the containers, whether it be instructions or supplies, goes to its proper destination, via suction, in less time than it takes to tell.

COST OF A PSYCHIATRIC UNIT IN A GENERAL HOSPITAL

"Psychiatrists," said Mr. Ebert, "generally recommend that community hospitals set aside 10 percent of their beds for the care of psychiatric patients, but this figure has to be looked at with a bit of skepticism by people administering over-all care for all types of patients.

"When we evaluated our needs, it was planned to set up five percent of our total beds, or the 22-bed unit now in operation. In creating it, we had to follow the building module of a new wing which had been designed around a 34-bed standard nursing unit. By using the same floor space as we would have for a 34 bed unit, we came out with only 22 beds because of the additional area needed for daytime activities.

"The construction cost of a 22-bed unit versus a 34-bed unit on the same space is about the same, so you don't get nearly as much bed space per dollar in a psychiatric unit. The best we could determine from our contract was $180,000, or $8,100 per bed, as compared to $5,200 a bed in a regular nursing unit.

"As for the financial aspects of operation, we decided on a flat rate of $16* *(see footnote, page 42)* a day after investigating all the factors. This rate covers any type of room accommodation, whether it's a locked room, detention room, a private or semi-private room, or a three-bed room."

Total charges for 1958 were $104,000, of which $65,000 was covered by insurance. This averages out to just about the same proportion covered by insurance in other areas of the hospital. (The Blue Cross in Indiana covers mental illness up to 30 full days and 30 half-days, and the patient can be readmitted.)

Collections from patients totalled $31,000, bringing the total to $96,000, leaving an uncollected total of $7,700, or a loss of about seven percent—again about what is averaged in the rest of the hospital.

"Now," continued Mr. Ebert, "one thing I think it is very important to consider is that a psychiatric unit doesn't make as much demand upon other services as do other nursing units. Patients are seldom transported to other areas, seldom go to x-ray, rarely need laboratory work. In today's treatment, the pharmacy is used a good deal, and we charge for drugs on the same basis throughout the hospital.

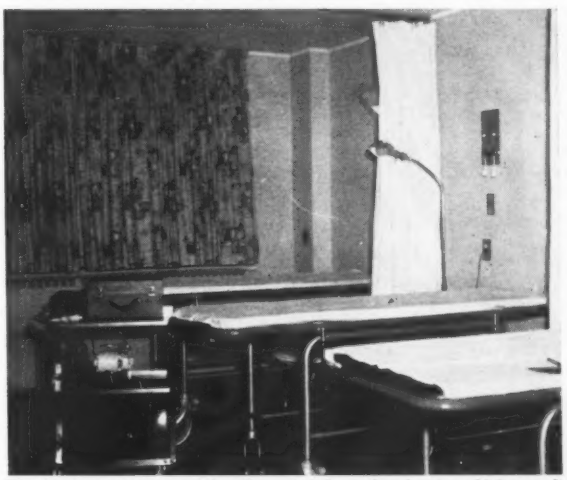
"I think it would be possible to consider opening a psychiatric unit if you could tack an eight- to 10-bed unit onto a 100-bed hospital. There is no need to worry about it overtaxing your other facilities. It makes very little demand on housekeeping and laundry facilities compared to other areas. Of course, it has the same demand on the administrative area for insurance and collections, and about the same on pharmacy and medical records. You may get a little extra demand on maintenance, because once in a while somebody will tear the place apart no matter how well designed it is.

"Our occupancy," continued Mr. Ebert, "is about 80 percent, which is fairly good for a 22-bed unit. In 1958, our average cost per patient day at Ball Memorial, including depreciation, was about $25. The best evaluation we can come up with for our psychiatric unit is that the cost per patient day is running at about $6 a day less than the $25 average, or about $19. This will, I am sure, come as a surprise to many administrators; I know it did to me.

The nurses' station is compact, highly efficient, and affords an excellent view of the community room and the corridor. All rooms are connected by inter-com so the nurse in charge can keep in touch with other staff members, and patients in closed rooms.

"In any cost analysis, we have to assume how much of the administrative cost is to be allocated to the psychiatric unit, and how much to maintenance, and so forth, and these we appropriated by the square foot.

"Our census built up rapidly from the time the unit was opened. We are staffed a little heavier in the unit than in a regular nursing unit—the number of employees per patient is up about 20 percent—and still the unit is self-supporting.



The treatment room contains three curtain-enclosed cots, which permit three patients to be treated and observed simultaneously while maintaining a sense of privacy.

"As far as your question about the minimum-size unit that can be operated, I would suggest that administrators use the employee requirements as a yardstick. Certainly, one would not want to staff a psychiatric unit with less than two people at one time, just because of the type of patients. This should be a limiting factor. So perhaps an eight- to 10-bed unit would be the very least size if it is to be a separate service; anything smaller would be economically unsound.

"From our own experience, establishment of a psychiatric unit in a general hospital is not only financially feasible, it is an individual, hospital, and community asset of considerable magnitude, and one we couldn't do without."

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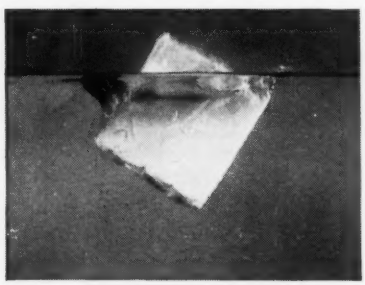

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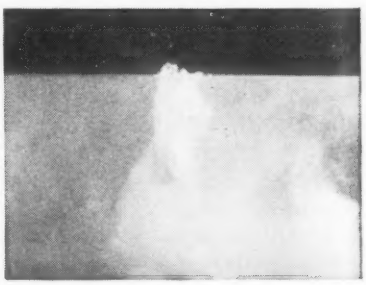

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HOSPITAL DIVISION

THE SEAMLESS RUBBER COMPANY

NEW HAVEN 3, CONN.

Good Samaritan's Supermarket Layout Simplifies Central Purchasing and Stores

● In 1958, the Good Samaritan Hospital in Cincinnati, Ohio, was one of the city's oldest, having been built in 1852, and one of its largest, totalling 701 beds including bassinets.

Early this year, a new wing was opened which added 99 beds; a premature nursery for 32 babies, with an isolation and observation nursery; a solarium and penthouse for recreational activities; two psychiatric wards; occupational therapy facilities; a patient library; dining room and cafeteria; x-ray, cystoscopy, and fracture rooms; a laboratory and blood bank; 15 operating rooms (12 major and three minor); 16 labor beds; and five delivery rooms.

The staggering task of supplying all these new units, in addition to the very considerable number of old units, was accomplished as simply as one doubles the capacity of a motorcycle—by attaching a sidecar for the new passenger.

So highly organized, efficient, and dependable was the driver—in this case the Central Purchasing and Stores system developed and initiated about seven years ago by administrator Sister Eugene Marie—that the passenger experienced no qualms, undue shaking up, or delay in arriving at its destination.

Sister Eugene Marie, a born organizer and executive, radiates a contagious kind of calmness, set off by a quiet sense of humor which reveals itself in a sudden twinkling in the eyes or a momentary pause in the conversation, which she apparently devotes to relishing the point before going back to the business at hand.

"Before we installed the new system," she said, "department heads did their own purchasing. On the face of it, this may seem like a good idea in terms of their intimate knowledge of their own department needs. But turning the coin over, we found disproportionate drawbacks. We are a large and busy hospital, and the department heads could ill spare the time needed for interviews with salesmen, and for a proper pre-evaluation of new products before placing an order. And since it was not basically part of their training nor experience, not all possessed the know-how to negotiate prices or obtain competitive bids. We do, however, continue to keep the department heads very much in the picture, and no change in supplies or equipment is made without a consultation with the individual concerned.

Sister Eugene Marie, administrator, confers with purchasing agent Edward P. Kent. Special requisitions for supplies and equipment not normally stocked by the hospital must be approved by the administrator; however, no changes are made in basic items stocked without consultation with the department head concerned.

"There was also a tendency, since one department head was not conversant with the purchasing of another, for the total number of vendors involved to become unwieldy, and therefore wasteful. Volume price concessions were usually lost; cost of delivery and processing of accounts increased.

"We had, quite understandably, a selling job to do when we relieved our department heads of their autonomy; but the adjustment period was brief because of the benefits accrued."

Prior to the establishment of the present Central Purchasing and Stores system, the storeroom was an 11′ x 60′ area devoted mainly to storing mattresses and other bulky items, and with one short shelf for medical and surgical supplies. The area was too crowded to bring any large amounts of merchandise in for direct stocking or stacking, so a great deal of time, and mileage, went into frequent trips between the hospital and its suppliers.

The present "supermarket" setup, which covers a basement area of some 5,000 square feet, was designed to get away from the shelves-against-the-walls

(Continued on next page)

The supermarket layout utilizes the entire storeroom area to its fullest capacity. Items are stocked according to department, and the open shelves afford excellent visibility and accessibility.

PURCHASING AND STORES continued

type of storeroom, and so utilize to its fullest capacity the entire area. It was diagrammed down to the last shelf bolt before it was installed, and every phase of its overall functioning, from the type of requisition sheets to be preprinted, to the types of trucks to be used both for stocking the shelves and delivering supplies to the floors, was down in written specifications before operation began.

Physically, the aisle-separated shelves have excellent accessibility and visibility, and the clerks check records, remove items and restock shelves with all the speed and aplomb of a veteran hand at the supermarket.

There are 1700 items on the shelves, ranging from salt and pepper shakers to bolts of linen, and covering all the needs of all departments with the exception of pharmacy and dietary. For the latter, however, purchasing agent Edward P. Kent procures china, flatware, and paper goods.

Stock is arranged on the shelves according to departments. Each vertical dividing post has a bin holding reorder cards, one card for each of the items stocked on the section of shelves it inventories. The cards, on which are noted date and number of the given items issued for use, serve to alert storeroom supervisor Dick Weber when the stock has reached its predetermined minimum. Minimum and maximum quantities are determined by usage figures, and the time required for delivery. When stock has reached its minimum, the reorder card is sent to Mr. Kent, who gives it immediate attention.

The "supermarket" so appeals to the imagination and sense of order of the people who work in it that they often come up with spontaneous suggestions that further lubricate the precision machinery. The storeroom boy, for instance, started tagging certain items with a colored cardboard, which he dubbed a "red flag."

"That means," he explained, with the authority of an engineer pointing out a weakened trestle, "that we have a danger spot there. The items, generally three or four of them at the most, aren't moving. I don't give them the red flag treatment till they've been sitting there maybe five or six months, then Mr. Kent or Mr. Weber finds out why."

The reason is usually that one or more doctors no longer use such-and-such type of material; or a nurse supervisor eliminates the use of a certain item, but neglects to pass that information along to purchasing or the storeroom. If the supply on hand is small, the staff cooperates to use it up, to avoid re-shipment to the vendor.

Above, a storeroom clerk fills an order. Each item on the requisition slip is checked off when it is loaded onto the truck. A similar check is made by the receiver, who signs the forms and returns one copy to the storeroom, and one to the accounting office.

Below, the clerk pulls new requisition slips to send with the truckload to replace those used for the order. These are placed in the standard loose-leaf catalog used by all hospital departments.

Immaculate shelves are a point of pride with the storeroom staff for two reasons – "our people in the hospital like to get nice, fresh-looking supplies; and we feel it's only fair to the manufacturer when we return merchandise to see that he gets it back in as good shape as he sent it out" – so the supermarket has another reason for being held in such high regard: The ease and efficiency of this type of operation gives the staff the breathing periods necessary to keep up on housekeeping chores.

Each department head is supplied with a loose-leaf catalogue of general stores supplies, with sheets colored according to departments, and preprinted to serve as requisition forms. The department head fills in her floor or department identification, the items and quantities needed, signs, and sends the forms to the storeroom.

The storeroom clerk checks off each item as he loads it onto the delivery truck, and returns the requisitions with the supplies. The receiver checks the items, signs the forms, and sends them to the accounting office. Also included in the truck load are new sheets to be inserted in the catalogue for future reordering.

The catalogue, the storeroom, and the perpetual inventory are all set up in the same manner, i.e., all items in each department are arranged aphabetically and numerically.

The storeroom keeps all purchase orders on file, and does its own receiving If a packing slip is included in the shipment, it is stamped with the date of receipt after the merchandise has been examined for transportation or other damage. One copy is stamped by the person on the floor who receives the merchandise, and returned to the storeroom; the other copy is sent to the accounting office. If no packing slip is included, one is made out for accounting.

There is a special purchasing requisition for supplies and equipment not normally stocked. These must be approved by Sister Eugene Marie, and since hers is a searching and knowing appraisal, restraint consistent with need is shown. She is as aware of the number, type, and condition of the receiving blankets allotted to the obstetrical department as she is of the progress of the newest preemie.

Approved requisitions go to the purchasing office, which puts the items out on bid. Contracts are awarded, and a purchasing order made out in four copies: one each for vendor, purchasing, accounting and receiving. The receiving copy is narrower, eliminating quantities on the order. This makes it necessary for the receiver to count all items received, and serves as a double check.

The perpetual inventory is posted on a bookkeeping machine for speed and accuracy, but a rotary file can serve the same purpose. Data for posting are obtained once a month by the inventory clerk through the use of the recap board, known affectionately as "Sister Eugene Marie's Ouija board." All similar requisitions are lined up on the recap board so that all identical items are on a direct horizontal

The inventory clerk does her monthly stint with Sister Eugene Marie's "Ouija board" — a recap board on which all similar requisitions are lined up so that identical items are on the same line. Using a T-square, the total of each item is added and transferred to the master copy.

line. Using a T-square for convenience, the total of each item is added and transferred to the master copy. The latter is the source of data posted to the perpetual inventory records. This recap method, which the staff terms "fun" to use, saves time and error.

Sister Eugene Marie's philosophy that the delegation of authority and responsibility should be given according to the recipient's ability and desire to shoulder it, is reflected in her statement that "the success of Central Purchasing and Stores depends on the person responsible for it. He should be given recognition and status due his position, with authority equal to his responsibility. There should be a definite understanding regarding how much and what can be purchased without administration's approval, with dollar volume and classification of items clearly defined.

"He must be tactful, and anticipate requirements; interpret trends and evaluate new products; have some knowledge of accounting; and serve as a liaison between the hospital and the vendor.

"Other things being equal, we favor the local vendor because of the service given by a local company in an emergency. How many sources of supply to use must be a matter of hospital policy. It's advantageous to limit the number of vendors; it's unwise, however to put all your eggs in one basket, because a strike or other emergency cutting off production would affect the entire hospital."

Much the same philosophy is reflected in the thinking of Mr. Kent, who has been Good Samaritan's purchasing agent for the past eight years. "To my way of thinking," he said, " a storeroom clerk is no less important in his job than the purchasing agent is in his. He's handling dollars and cents, in very large amounts. I rely on his judgment in many matters, and he serves to caution me on any items that aren't routine, so that every one of them is followed through on performance before it is accepted for Central Purchasing and Stores."

This belief in the value of the individual's contribution goes all the way down the personnel line . . . to the lad who hoists the red flag before his supermarket gets into any real trouble.

Controlling Food Costs

By John W. Stokes*

● How can you keep costs in line and still provide highest quality food for patients and employees?

Often asked by hospital administrators and dietitians, this question implies a necessary correlation between quality food and service and high cost. Actually, in our studies of more than 100 hospital dietaries in this and other countries, we have not found this to be true. Sound methods of food cost control invariably seem to foster high standards of quality and service.

Given a good organization, with trained employees and well-defined lines of authority and responsibility, the administrative dietitian makes use of cost and quality control systems to set definite goals. At the same time, these control systems furnish constant and dependable yardsticks by which progress toward these objectives is measured.

Food costs, according to government statistics, have increased by approximately 20 percent since 1947. Prices of meats, however, which constitute nearly 40 percent of the hospital food budget, have risen more than the general average. Increasing use of therapeutic diets also contributes to higher dietary food costs. A decade or so ago only 10 or 15 percent of the patients in a general hospital were on special diets. Today as many as 60 percent of the patients in a large hospital may be on therapeutic diets.

It is essential that one specific individual be responsible for the food cost control system. Whether it be the chief dietitian or one of her staff, this responsibility and the necessary authority should be clearly defined.

Food cost control systems vary in detail, according to the institution's particular needs, but the essentials of a good system are as follows:

1) Assignment of responsibility to member of staff
2) Establishment of definite cost objectives
3) Standardization of formulas, portions, and service
4) Determination of unit costs
5) Measurement of current progress

Steps 2, 3 and 4 are interdependent. They will be developed simultaneously and tried and revised until portion sizes and unit costs are in accord with the established cost objectives.

It also is necessary to set up means of recording issues of food to the cafeteria and various patient services, if such records are not already available.

COST OBJECTIVES

With respect to meals served in the employees' cafeteria, establishment of a cost objective is relatively simple. The total labor cost of the cafeteria is computed, then added to the value of other expenses and overhead charges.

Total labor cost will consist of:

1) Cafeteria payroll
2) Charges for holiday and vacation pay, if any
3) Value of free meals consumed by cafeteria employees
4) Other costs, such as Workmen's Compensation, Social Security taxes, cost of benefits such as hospitalization, pensions, etc.

Other expenses consist of such charges as:

1) Paper and cleaning supplies
2) Laundry
3) Repairs and maintenance
4) Utilities (fuel, light, power, water, telephone)
5) Extermination and other services
6) Space charges, if any

Overhead includes any apportionment of dietary and general administrative charges, depending upon the hospital's policy.

Assuming that for a given period, total labor costs represent 35 percent of total cafeteria sales, and other expenses and overhead are 15 percent of sales, this will constitute 50 percent of the sales dollar. If the cafeteria is to be operated on a break-even or nonprofit basis, the food cost should not exceed 50 percent of the sales dollar.

In speaking of food cost, it is customary to use the term "raw food cost." Although much food today is processed rather than raw, this simply means the cost of the various food items delivered at the hospital. It does not include labor used within the hospital for preparation or cooking, nor does it include fuel, power etc., which is incident to such food preparations.

The food cost objective for patients' meals must be stated in terms of the cost of an average meal. In governmental institutions, this may be computed in terms of a "ration" (the three meals served on an average day).

This by no means affords as satisfactory an objective as the food cost percentage method described above for use in the cafeteria. For one thing, it does not provide as sound a basis for comparison.

The average food cost per meal is obtained at the

*John W. Stokes & Co., Management Consultants, Boston.

end of a given period by dividing total cost of food consumed in a given area by the number of meals served within that area. If the meal count is based upon occupancy figures rather than the actual number of meals served, the food cost per meal will be lower than its real value.

Another weakness of the average meal cost method now in vogue is that it gives the dietitian no idea of what is expected of her. Should patients' meals cost 30 cents, 35 cents, or 40 cents? The percentage method, however, provides a definite objective. If the food cost percentage is maintained, there is every expectation that other costs—labor, other expenses and overhead—will be provided for.

STANDARDIZATION

That all formulas or recipes should be standarized and recorded is a fundamental tenet of good food service management. Yet one often finds many if not all of the dietary formulas recorded only in the cook's head. Obviously all formulas should be written or typed in a readily available form. These formulas must be followed meticulously if food is to be of uniform quality and if costs are to be intelligently figured. See Figure 1 for an example of a formula card.

In serving cooked food, portions and methods of service must be standardized and recorded. Serving instructions should be definite, giving sizes of scoops or utensils to be used. Diagrams showing plate arrangements are also desirable to insure uniform and attractive service.

Separate cards giving formulas, portions, and serving instructions should be prepared for those employees requiring them. These data may be combined on a master card, for the dietitian's files, which can also contain cost data, as will be indicated later in this article.

Figure 1
FORMULA CARD
Meat Pie with Vegetables

Ingredients:
30 lbs. boned chuck net (diced)
1 lb. flour
3 oz. salt
1 teaspoon pepper (1/10 oz.)
1 lb. Primex (or butter or margarine)
2½ gallons of stock (or water)
4 oz. dehydrated onions
8 lbs. celery (½ box) cut into 1" pieces
5 lbs. sliced carrots
3 oz. salt (to season well)
6 lbs. pie crust

Preparation
Weigh or measure flour, salt and pepper and blend well. Toss or roll cubed meat in seasoned flour until each piece is coated.
Place fat in large frying pan and brown the meat a light golden brown.
Add meat stock or water. Let simmer about one hour.
Add onions, celery and carrots and cook another hour or until meat and vegetables are tender.
Pour into steam table pans. Let stand for a few minutes before covering with pie crust. Bake in oven until pie crust is lightly browned.

DETERMINATION OF UNIT COSTS

The increasing use of pre-cooked and pre-portioned foods has simplified determination of unit costs for many dietitians. For such items, the unit cost is already established. However, for foods which are prepared and cooked in the dietary kitchen, actual tests are involved. In such tests shrinkage and waste are noted and the resultant yield in edible portions carefully tabulated. The cost of a given batch is divided by the number of portions yielded to obtain a unit cost. It is advisable to add to this unit cost an allowance for waste (food sticking to pans,

(Continued on next page)

Figure 2
FOOD COST CARD

Meat Pie with Vegetables	March 6, 1959	
30 lbs. boned chuck (diced)	@ .58	$17.40
1 lb. bread flour	@ .071	.071
3 oz. salt	@ .0013	.0039
1 teaspoon pepper (1/10 oz.)	@ .0038	.0038
1 lb. Primex	@ .20	.20
2½ gallons stock or water	.00	.00
4 oz. dehydrated onions	@ .07	.28
8 lbs. celery, cut in 1" pieces (½ box)		1.25
5 lbs. sliced carrots	@ .06	.30
3 oz. salt (to season well)	@ .0013	.0038
6 lbs. pie crust	@ .10	.60
	Total	$20.1126

Total Yield: Approximately 4 gallons. Cost per gallon $5.028
3 (1⅓ gallon) cafeteria pans. Cost per pan 6.704
32 ¾ cup servings per pan. Cost per serving .2094
Cost per serving $.2094
Plus 10 per cent allowance for waste .0209
Unit cost .2303

Menu price in cafeteria based on 50 percent food cost objective: .2303 ÷ .50 = $.46
Dish would be priced at $.46 (or .50 if odd-cent pricing is not in vogue)

spillage, etc.). The food cost card is illustrated in Figure 2 (page 51). On this card the total cost is broken down into cost per serving and a 10 percent waste allowance is added.

In order to avoid re-figuring cost per serving each time prices change, a sliding scale of unit prices can be figured and added to the card, based on varying prices for the principal ingredient. (See Figure 3.)

Figure 3
PRICE RANGE — MEAT PIE WITH VEGETABLES

Boned chuck Cost per lb.	Unit cost plus waste allowance
$.54	.2166
.62	.2441
.66	.2578

Once unit costs are determined, it is possible to base cafeteria prices on the food cost percentage objective. However, it will not be possible to price all items on this basis. Half-pint containers of milk, for example, may at certain seasons cost as much as seven cents, and for policy reasons it may not seem desirable to charge more than 10 cents. In this case, milk, which is an important menu item, will carry a 70 percent food cost.

In order to meet this problem, it may be necessary to price less expensive items, such as macaroni, gelatin deserts, etc., at a lower food cost (possibly as low as 33-1/3 percent) in order to offset these high-priced items. In instances where prices fluctuate, it may be necessary to change the make-up of certain dishes or omit them from the menu temporarily in order to achieve the over-all percentage desired.

MEASURING PROGRESS

The only accurate measurement of food cost is afforded by the physical inventory taken weekly or monthly. This is done by an accurate listing of all food items of appreciable quantity in kitchen and storage areas. These are valued at cost prices, the total giving the value of the food inventory on hand.

The cost of food consumed is figured as follows (figures used for illustrative purposes):

Value of food inventory at beginning of period	$ 5,000
Total food purchases during period	12,000
	17,000
Less value of inventory at end of period	6,500
Cost of food consumed during period	$10,500

RECORDING OF ISSUES

Food in the dietary may be issued to the kitchen directly from purveyors or from the storeroom, and to the cafeteria directly from the kitchen or from the storeroom.

For patients' meals food is usually issued from the kitchen, although if nourishments are included in cost of patients' meals, they may be issued from the storeroom. A record is kept of food issued to the kitchen, to the cafeteria, and for patients' meals. If this record is kept daily, it is possible to compute a daily food cost for cafeteria and patients' meals. This is subject to correction when the periodical physical inventory is taken.

DIFFERENTIAL OR DEPARTMENTAL COSTS

When different types of meals are served to various groups of patients — such as private, semi-private and ward — it is possible to prepare differential food costs for each of these areas by recording issues from the kitchen and/or storeroom to each of these areas. This is important in large hospitals where the cost of meals may vary considerably between the various groups.

If the physical inventory shows that food cost goals are being attained, well and good. As a rule, however, the actual food cost is apt to run higher than the predetermined objective.

In this event, the following areas may be checked for waste and leakage:

1) **Purchasing:** Are prices in line?
2) **Receiving:** Are all goods purchased actually received?
3) **Storage:** Are losses occurring in storage through poor refrigeration, spoilage, damage by rodents, etc.?
4) **Food preparation:** Is waste in food preparation (trimming, peeling, etc.) excessively high?
5) **Cooking:** Is shrinkage unduly high due to high-temperature cooking?
6) **Portioning:** Are instructions being followed to avoid over-portioning?
7) **Accounting for cash:** Is cash strictly accounted for in cafeteria?
8) **Pilferage:** Is food being lost through pilferage?
9) **Employees' meals:** Are food-service employees receiving the meals they are entitled to and no more?

IS COST CONTROL WORTHWHILE?

Some phases of the cost control system such as standardization and recording of formulas, portions, and service, and the determination of unit costs cannot be accomplished overnight. Yet the rewards of effective control can be very great. One 250-bed hospital, serving some 500,000 meals per annum, recently reduced its food cost by seven cents per meal. This resulted in a savings of $35,000 yearly.

In 1957, a 1000-bed institution reorganized its food purchasing procedures and effected savings of approximately $125,000 yearly in this area alone.

Food costs are not likely to decrease substantially in years to come. Yet by means of an adequate control system, dietary costs may be kept in line. At the same time, attention to cost control will invariably result in food of more uniform and higher quality being served to patients and employees.

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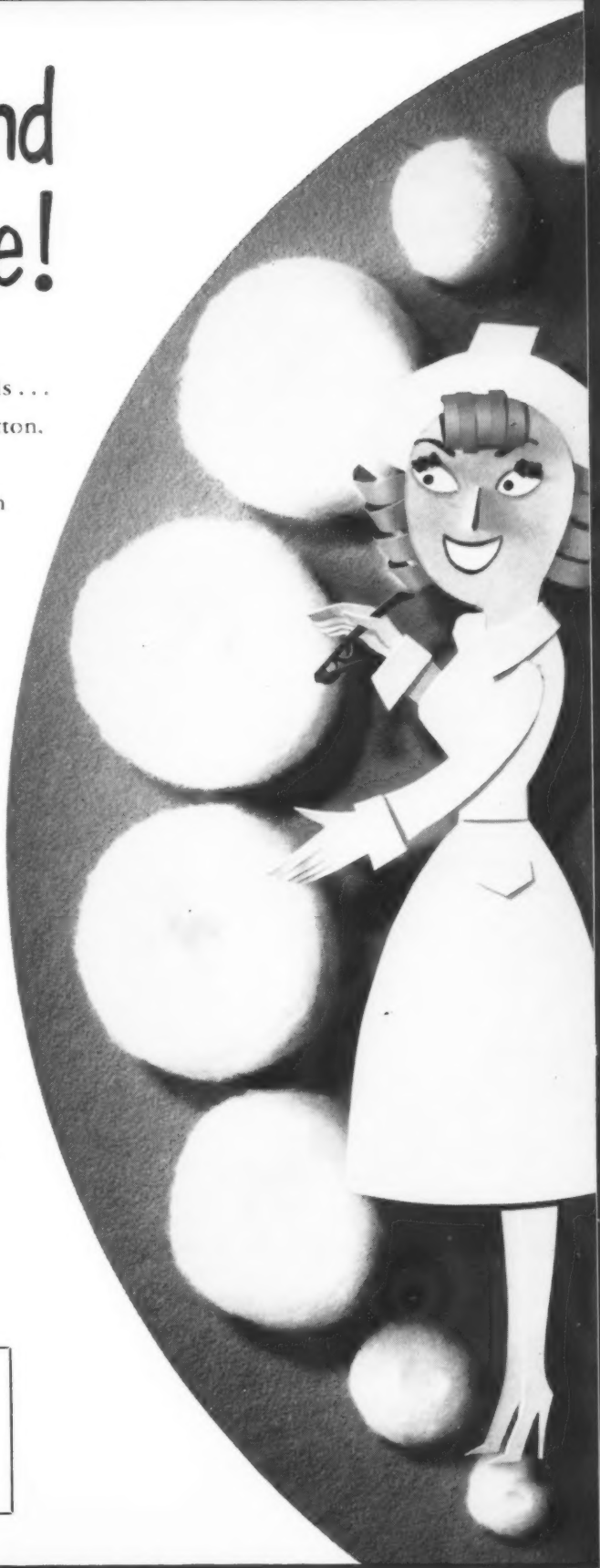

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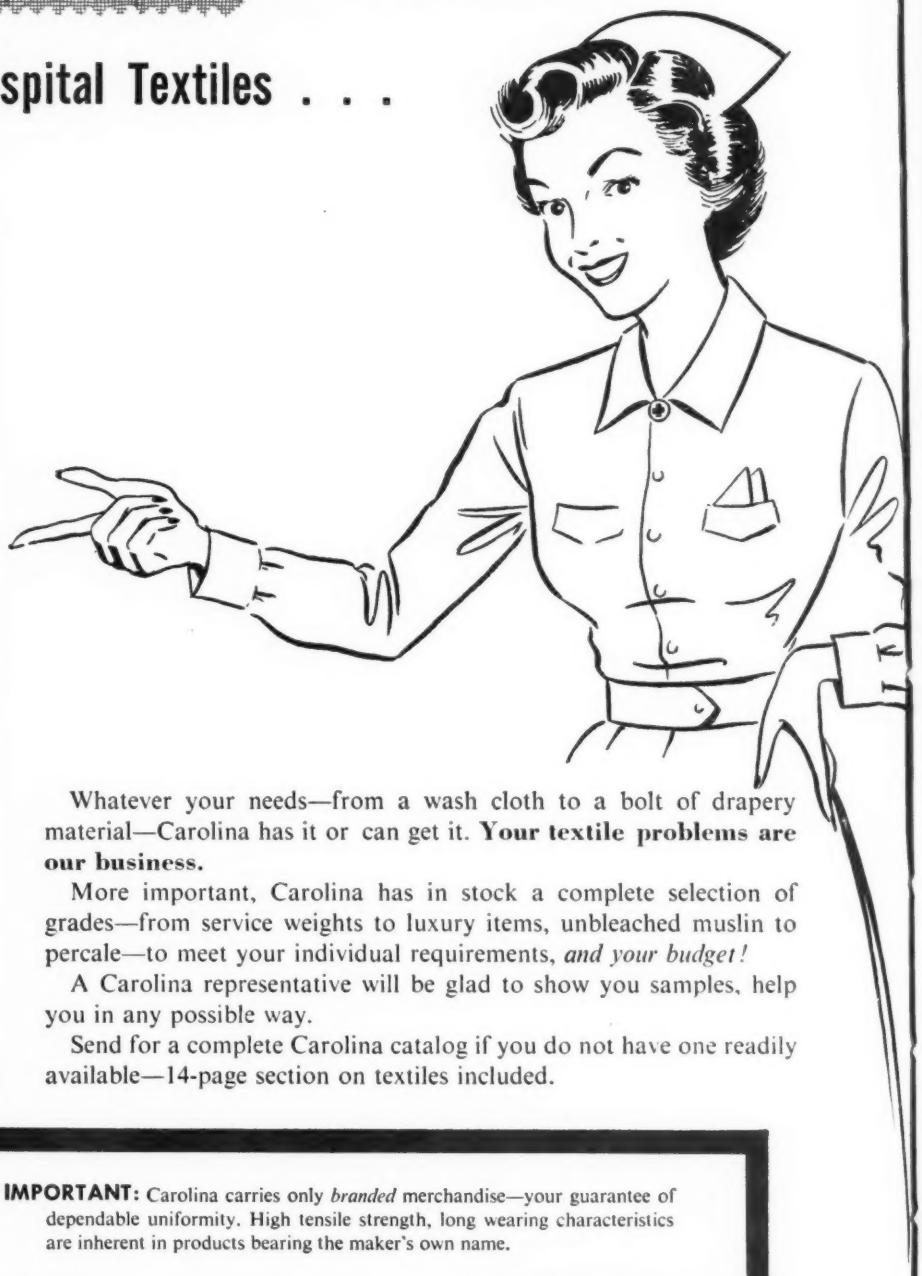

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What's being written . . . . .

. . . on the emergency department in the hospital.

Reviewed by Sigmund L. Friedman, M.D.*

● In recent years, the emergency departments of the nation's hospitals have increased the volume of their services dramatically. Published data report 9,677,000 visits in 1954, and 15,106,000 in 1957, an increase of 56 percent.

This increase is important to the individual hospital not only because of what it means to the emergency department itself, but also because of its impact on other departments such as x-ray, clinical pathology, and electrocardiography.

The reasons for the increase are important insofar as their study will indicate the lines along which administrative action should be taken. The reported reasons include increases in third-party coverage; unavailability of physicians on certain days and at certain hours; increase in acceptance of the emergency department by both patient and physician as a fitting place for the treatment of injuries and acute illness; use of the emergency department by some physicians for minor surgical procedures previously done in their private offices; use of the emergency department instead of the regular clinics or private offices to avoid long waits, rigorous financial investigation or the payment of a fee; increases in the number of accidents or "emergencies" in police ambulance calls; and changes in the personnel on the ambulances.

Personal observation and interviews with physicians, administrators, and emergency department staffs indicate that in individual hospitals these explanations play roles of varying importance. For example, some hospitals have had marked increases in their emergency work despite the fact that there have been no changes in Blue Cross coverage or significant increases in the number of accidents in their community.

Furthermore, personal observations and interviews, as well as reports in the literature, indicate that the *role* of the emergency department has been changing quite radically within the past decade or decade-and-a half. No longer does it serve exclusively, or even mainly, patients in need of immediate care. Rather it has added another function: that of an extension of the outpatient department and, to some extent, substitute for the physician's private office.

The acute trauma, the surgical and medical emergencies no longer constitute the majority of cases seen. We cannot even be sure that most of the patients come because their problems are – to them – urgent. Most of the illnesses range widely and include many general medical and surgical problems, some of which require intensive but not necessarily prolonged study.

For example, a hospital, long noted for its ambulance and traumatic service, recently found that only about two-thirds of its emergency patients were surgical, of whom only ten percent required immediate admission; the remainder were referred to the outpatient department and to private physicians for follow-up care. The remaining "emergency" patients were medical, and only about one-fourth of these were admitted.

It is significant that, though there were fewer medical than surgical patients, more medical patients were admitted than surgical. It must be pointed out, however, that these figures do not reflect the number of patients who, either in the eyes of the physician or in their own eyes, required urgent care, or the number who might have waited for care and treatment in an elective clinic.

Another, larger, hospital found that only about one-fourth of the patients coming to its emergency department had accidental injuries; the remainder presented problems of almost every variety.

Administrators of small hospitals have reported that "more patients (are) coming on non-emergencies to obtain services of physicians"; that their hospitals are "seeing more patients for routine work —few are true emergency patients"; and that "more people come for minor needs."

These changes in the nature of the work done in the emergency department mean that, for many hospitals, the concept that originally dictated its policies, procedures and resources is no longer wholly valid. But what is true for "many" hospitals, or even for "most," need not necessarily hold true for any one hospital. What is required of **each** hospital is a study to determine in what ways and to what extent the department has changed. Only then can the individual hospital decide if its policies, procedures, and resources need revising.

Though the study can be made by the hospital itself, it may be preferable to ask an outside survey team to do it. Should the hospital prefer to do its

(Continued on next page)

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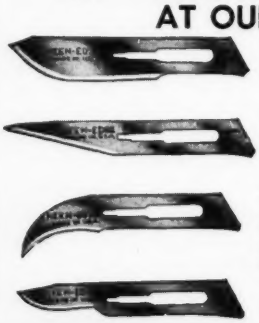

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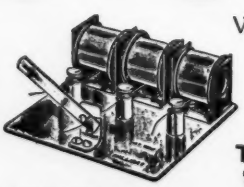

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own, the following steps might be taken:

1) (a) Review the trends in visits to the department in recent years (possibly since World War II).

(b) Review for the same period the trends in referrals to such departments as x-ray, clinical pathology and electrocardiography.

(c) Review the trends in diagnostic and treatment problems as seen in the same period: the number and proportion of emergencies (accidents and both other surgical and medical emergencies); number and proportion of non-emergency cases (surgical, medical and pediatric)

2) If changes have occurred in the total number of visits, in referrals to other departments or in the diagnostic and treatment problems seen, then the reasons for the changes should be enumerated and evaluated.

However, if the study of the department is to be more than just another study, two additional evaluations should be made:

3) Evaluate the quality of emergency department care from the medical, nursing and "public relations" viewpoints.

4) Evaluate the quality and adequacy of the entire emergency department staff (medical and non-medical), the physical facilities and equipment.

Only after these data have been collected and evaluated, and after the evaluations have been made, can the next steps be taken:

—Establish standards and policies in the medical, nursing and administrative areas.

—Consider necessary and possible changes in the physical facilities and equipment.

One question that will certainly be raised by someone at sometime in the course of the study, particularly if there has been an increase in the services, is what, if anything can—or should—be done to reduce their number? The answer will depend solely on his and his hospital's philosophy.

Most hospitals believe, and act on the belief, that all patients coming to the emergency department must be seen by a physician. This is not only a matter of social and humanitarian philosophy, but utilitarian, for in this way the hospital "plays it safe."

Reduced to such terms, it is only *after* examination that a physician can decide whether a patient needs immediate treatment or can safely be referred elsewhere. And many a hospital and physician have learned to their sorrow that sometimes the correct decision cannot be made even then.

It may seem almost impertinent to stress that whatever services are given must be of the highest possible

quality, but concern with the quality of care given in the emergency department has been widespread. The surgical director of a large eastern hospital, which has a national reputation for its emergency services, has stated bluntly that "there is little doubt in my mind that the weakest link in the chain of hospital care in most hospitals in this country is the attention given to and in the emergency department."

Another surgeon, in discussing the problems involved in the care of emergencies, has pointed out that "many hospitals have failed to realize the importance of training, experience, and serious interest in this type of work. They may have clear-cut rules with regard to major and even minor surgery upstairs, and a good workable system of supervision of the younger, less experienced members of the staff; but in the emergency room the attitude may be that any doctor is alright. If it is a hospital with residents and interns, this "dirty work" may be turned over to the least experienced interns without even resident supervision. . . . If it is a hospital without interns or residents, the emergency room may be covered by indifferently trained and disinterested doctors."

The fact that many non-emergency patients come to the emergency department does not reduce the need for rapid screening and careful observation of every patient, since some of the most seriously ill patients, in need of immediate care, may be overlooked by superficial and careless examination. These problems require experienced personnel, trained to screen patients quickly and treat with judgment—personnel hard to find in any hospital, but much more so in the rural, small or non-university affiliated hospitals.

Personnel includes, of course, not only house staff and nurses, but also aides, orderlies, and clerks. These, too, must be carefully chosen and well-trained since, if untrained, unskilled or brusque, they may do almost as much harm as an unskilled or careless physician.

"Sound policies, well indoctrinated personnel, humane treatment, prompt coordinated care and a feeling for the public's demands and need are . . . basic. Molding all of these into an efficient unit is the greatest challenge facing any emergency service."

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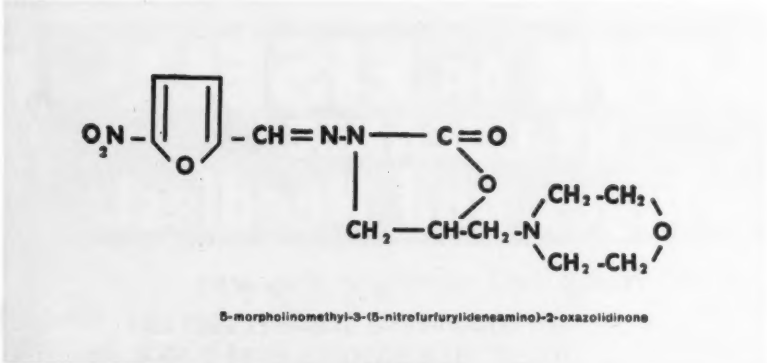

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By Leo T. Parker
Attorney at Law

• An executive of a hospital corporation asked this legal question: If a hospital patient dies or suffers injuries as a result of negligence of a nurse employed by the hospital, can either the hospital or the nurse be compelled to respond in damages, if the testimony shows that the nurse followed directions of a physician who was not in the employ of the hospital but who was employed by the patient?

A few weeks ago, a higher court rendered an outstanding decision clearly indicating that the answer to this legal question is in the affirmative. I shall review this case in considerable detail.

For illustration, in Goff v. Buchanan Hospital, 333 Pac. (2d) 29, the testimony showed these important and detailed facts: A woman named Goff was admitted to the Buchanan Hospital at the request of her physician Dr. Ashley for the purpose of having a child. Dr. Ashley was employed by the hospital, but he was paid solely by Mrs. Goff.

Under instructions from her physician, Mrs. Goff was administered pituitrin, a drug used to induce labor. About 7:00 p.m. Mrs. Goff was taken to the delivery room where her child was born. Prior to the birth of the child her physician made an incision just to the left of the 12:00 o'clock position of the cervix to relieve the constrictive band of muscle. This incision was not sutured, but pelvic packs were inserted to control the bleeding.

Mrs. Goff was then returned to her room. A nurse named Lee, who assisted during the birth of the child, told the doctor on three different occasions, the last about 9:30 p.m., that, in her opinion, the patient was bleeding too much. She testified that Dr. Ashley told her that the condition, as described, was normal. She also testified that Dr. Ashley instructed her on a testing method by which the rate of blood loss could be measured.

The nurse was instructed to time the period it took for the perineal pads to become soaked. At 9:45 she checked the patient and some blood was found on the pads, though they were in fair condition; at 10:15 the nurse checked the pads again and found that they were approaching the saturation point; at 10:30 the pads were found to be soaked with blood and the nurse changed them. During this period the nurse did not take the blood pressure, temperature, pulse or respiration of the patient. She did not call Dr. Ashley because, in her opinion, he would not have come anyhow. She also testified that she did not call him because the timing test had not been completed. The doctor's order sheet stated that he was to be called if the postpartum flow was greater than normal. At 10:15 she thought an emergency existed. At 10:30 she thought the patient's condition was pretty serious.

At 11:00 p.m. Miss Lee was relieved by Mrs. Kiese. She was advised by Miss Lee that Mrs. Goff was bleeding too much. About 11:10 Mrs. Kiese observed Mrs. Goff. The patient appeared to be going into shock. The nurse could not locate the patient's pulse, and she was cold and clammy. She called Dr. Ashley about 11:15, and he arrived at the hospital about 11:25. Mrs. Goff was taken to the delivery room where oxygen and adrenalin were administered. There was an attempt to give the patient a blood transfusion, but the doctor was unable to find a vein in which to insert the needle. Mrs. Goff died of a hemorrhage from a laceration of the cervix.

The husband of the deceased Mrs. Goff filed suit against the Buchanan Hospital, Dr. Ashley and the nurse Lee for heavy damages on the grounds that all were negligent in caring for Mrs. Goff.

During the trial Dr. John F. Blinn, Jr., a physician and surgeon, qualified to testify as to the standard of care of doctors and nurses in the locality, testified that Dr. Ashley's treatment of Mrs. Goff was not one which is ordinarily employed by physicians in good standing in the locality. The incision was not proper in technic and should have been sutured.

Dr. Blinn further testified that the nurse Lee's care was not commensurate with the skill ordinarily used by nurses in good standing in the locality in that she should have observed the blood pressure, temperature, pulse and respiration of Mrs. Goff, and that such observations would have indicated Mrs. Goff's perilous condition; that she should have called Dr. Ashley and should have notified her supervisor.

Dr. Blinn also testified that time was of the essence and that if proper medical care had been summoned sooner the chances of saving Mrs. Goff's life would have been greater.

Notwithstanding this testimony the lower court

refused to hold the Buchanan Hospital, Dr. Ashley and nurse Lee liable in damages to Mrs. Goff. The higher court promptly reversed this verdict, and said:

> **"Appellant Lee knew that Mrs. Goff was bleeding. She did not take her pulse, blood pressure, temperature or respiration. She did not call Dr. Ashley even at 10:30 p.m. when she was aware that the bleeding was more than normal postpartum flow, despite the fact that the doctor's order sheet stated he was to be called if there was more than the normal postpartum flow. . . We are satisfied that the evidence was sufficient to support a finding that the nurses, Lee and Kiese, were negligent. . . Conceding that Dr. Ashley was negligent, still if nurse Lee had called the doctor at 10:30 p.m., when she was aware the condition of the patient was critical, who can say that the same result would have occurred. The doctor may have been able to insert a needle for a blood transfusion. The longer the delay, the more critical the condition of the patient became. Time was a most important factor."**

Subcontractor Submitted Low Bid

Considerable discussion has arisen from time to time over the legal question: If, through an error, a subcontractor submits a low bid to do hospital construction work can he rescind his final contract with the general contractor, or will the hospital expenses and costs be increased?

According to a late higher court decision the answer is that the subcontractor is solely responsible.

For illustration, in Heifetz Metal Crafts, Inc. v. Peter Kiewit Sons' Company, 264 Fed. (2d) 435, it was shown that a general contractor had been awarded the general contract to construct the Topeka hospital plant, in accordance with published plans and specifications, for a price of $17,942,200. A subcontractor submitted a bid to perform certain work and supply materials, including kitchen equipment. After the subcontractor's bid was accepted he discovered that his bid was based on doing work in a single building whereas, according to the plans and specifications, the work was to be done in three buildings.

Immediately the subcontractor notified the general contractor of this error stating that he would not complete the contract for his bid. Then the general contractor signed a contract with another subcontractor to do this work for $50,100 more than the original subcontractor had contracted to do the job.

Later the general contractor sued the subcontractor to recover $50,100.

During the trial the subcontractor testified that he did not see or inspect the complete plans and specifications; but when he asked one of the general contractor's office employees for the plans on the kitchen equipment work, that employee got out for him two sheets of blue prints relating to Building 20 and said "This looks like it." These blue prints showed the plans and specifications for only one building.

It is interesting to observe that the higher court held the subcontractor liable to the general contractor in $50,100 damages and explained that the subcontractor would not be excused from his negligent failure to take time to carefully study and inspect the full and complete plans and specifications. The court said:

> **"With no bad faith or other inequitable conduct having been involved on Kiewit's (general contractor's) part, there was no equitable basis for Heifetz (subcontractor) to ask to have the $50,100 financial prejudice occasioned by its mistake and fault shifted from itself to Kiewit (general contractor)."**

This higher court went on to explain that either a general contractor or subcontractor may rescind a contract made in error only if the testimony shows that the party making the mistake had exercised ordinary diligence, and if rescision can be made without serious prejudice against the other party. Hence, if a contractor unintentionally submits a bid so low that he stands to lose money he must do the job, unless he can prove that the error was not due to his negligence and, further, that his rescision of the contract will not result in serious financial loss to the other contracting party.

Must Furnish Bond

Last month a higher court held that a hospital can only expect to collect payment for services rendered to an immigrant by having proof that the party who induced admission of the immigrant into this country furnished a valid bond guaranteeing payment for such services.

In State of Michigan v. Binder, 96 N. W. (2d) 140, the testimony showed facts as follows: A man named Binder made application to the immigration authorities in the U. S. state department to have one Johana Kizler admitted to the United States as an immigrant from Yugoslavia. In that connection, Binder sent to the American embassy in Belgrade an affidavit in which he promised to support Kizler during her lifetime and that she "will never become a public charge."

Thereafter Johana Kizler was permitted to enter the United States. She lived with Binder for over two years until she was admitted to the Pontiac State Hospital as a mentally ill person. She remained there as a patient at public charge for several years. Then the state sued Binder to recover payment for services rendered to Kizler.

The higher court refused to hold Binder liable saying that Binder's affidavit did not create a contract which obligated Binder as there was no act of Congress empowering immigration officials to make or require such a contract for the United States government.

This higher court went on to explain that in cases of this kind Binder should have been compelled to furnish a proper bond approved by the Attorney General, in such amount that would take care of costs and expenses of a state, county or municipality to provide hospital services to and for Johana Kizler.

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ZOLYSE is not recommended to be used under the age of 20 or in cases of fluid vitreous, subluxation of the lens, endothelial dystrophy or in traumatic cataracts where the hyaloid is not intact.[3]

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BALANCED SALT SOLUTION, ALCON, is now available separately in boxes of 36 for use in other ocular surgery.

[1] Girard, L. J., Dukes, C. D., and Fleming, T. C. Presented at the International Congress of Ophth., Brussels, Belgium, 1958.
[2] Kara, Gerald B., "The Use of Alpha-Chymotrypsin in Cataract Extraction," Research Report No. 10, Alcon Laboratories, Inc., 1959.
[3] Vail, D., et. al, Report: Committee on use of alpha-chymotrypsin in ophthalmology. Presented at the Sixty-fourth Annual Session, American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 11-16, 1959. (To be published)

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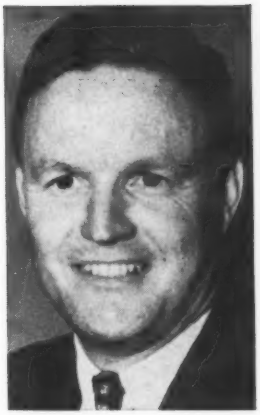
Senator Metcalf's analysis of developments in his own state and others offers valuable clues to trends of concern to everyone working in the broad areas of health and medical care.



Health Insurance Newsletter

By State Sen. George R. Metcalf*

"Met" Not Disenchanted. W. S. Thomas, Actuary of the Metropolitan Life Insurance Company, takes issue with the item "Disenchantment with Major Medical" presented in the November issue, page 56.

"In view of the fact that over 5.5 million individuals are covered under Major Medical Expense Insurance," he writes, "I think the article should be balanced with some positive statements on the advantages of Major Medical Expense Insurance."

"As one of the largest underwriters of Major Medical Expense Insurance, we have not been disillusioned, nor are the employers and employees who are enjoying the wonderful broad coverage provided by these plans suffering any disillusionment . . ."

Mr. Thomas admitted that questions have arisen both as to the relative merits of Major Medical supplementing a base plan, as compared with a single, unified comprehensive plan, and also regarding abuse of Major Medical Expense Insurance by those willing to take advantage of this broad form of coverage. On the former point, however, Metropolitan remains enthusiastic about the single, unified comprehensive plan. As for the latter question, Mr. Thomas stresses that the problems of abuse can and must be worked out, rather than giving any consideration to discarding this most important service to the health insurance buying public.

* * *

Cure for "Overutilization." "There is little point in complaining," declares Franz Goldman, M.D., associate professor of medical care emeritus, Harvard School of Public Health, "about 'overuse' of hospitals and admonishing physicians to stop the practice of needlessly hospitalizing insured patients if the contracts exclude diagnostic tests outside hospitals and make but skimpy provisions for care at the doctor's office or the patient's home. Comprehensive physician's service organized on the basis of group practice and emphasizing prevention, early diagnosis and service to ambulant people reduces the frequency of hospital admissions and also of surgical procedures in the hospital . . .

"It is an irony indeed that the much heralded voluntary health insurance actually is voluntary sickness insurance in its purest form for all but a few million people, most of whom are members of group-practice prepayment plans. Prevention of disease and early diagnosis have become the casualties of a public fostering voluntary insurance of the 19th century type. Prevention, diagnosis, treatment and after-care are one continuous process. It is logical, wise and economical to prevent both diseases and losses causing claims, but this lesson has not yet been learned by most insurance organizations."

* * *

Guide to Purchasing Health Insurance. A 16-page booklet entitled "A Buyer's Guide to Voluntary Health Insurance" has been prepared by the American Medical Association. It discusses such matters as expenses, extent of coverage, contract provisions, exclusions, waiting periods, etc. Copies may be obtained by writing to Council on Medical Service, American Medical Association, 535 N. Dearborn St., Chicago 10, Ill.

* * *

Nursing Home Accreditation. One generally acknowledged reason for Blue Cross financial troubles is the fact that the plans pay benefits for hospitalization only to accredited institutions, where costs hover above $20 per day. Yet many patients—particularly those of advanced age—do not require full-scale hospital services and could be cared for just as well or even better in nursing homes, where costs run closer to $6 per day. Only reason many such patients go to hospitals instead of nursing homes is that their Blue Cross benefits cover the former but not the latter.

Now a first step has been taken to correct this situation. A Council for the Accreditation of Nursing Homes has been announced in Buffalo, N. Y., by representatives of eight medical and health organizations.

The Council will be concerned initially with the 80 nursing homes in the Western New York Area. Subsequently, it hopes to expand the program throughout the nation.

The local Blue Cross has agreed to consider applications for operating agreements from accredited nursing homes, giving the homes a twofold incentive for seeking accreditation—stature and added financial stability.

*Chairman, State of New York joint legislative committee on health insurance plans.

So You Can't Afford a Full Time Pharmacist!

A Few Facts To Show Why Practically Every Hospital Should Have Its Own Pharmacist

by Alfred A. Mannino
EXECUTIVE DIRECTOR, HOSPITAL DEPT.
McKESSON & ROBBINS, INC.

During my recent tour of hospitals throughout the country I found a very surprising situation. Some of the smaller hospitals I visited told me how they could not support a full time pharmacist . . . yet, upon visiting other small hospitals, with even fewer beds, I found them most enthusiastic about their full time pharmacists.

Direct Dollars and Cents Savings — I found these small hospitals take a very realistic approach toward having a full time pharmacist. First, of course, they look at the actual savings that can be made. Here's a typical example: a 37-bed hospital has learned that with a full time pharmacist the cost of generic drugs is about $250 per month compared to previous costs of $500 per month for proprietary drugs—a direct saving of over $250. Hospitals with more beds have experienced even greater savings. But drugs are not the only place large savings can be made.

Additional Economies—I could give you hundreds of other areas where a full time pharmacist would save money in a small hospital, but I'll just mention a few of the major examples. The actual purchasing for the pharmacy can effect a great saving in both time and money. In many instances just keeping the pharmacy from being improperly stocked —particularly in new pharmaceuticals—will actually pay much of the pharmacist's salary. The supervision and control of narcotics certainly removes one of the administrator's greatest headaches.

In addition, the training a pharmacist receives parallels in many respects that required for hospital administration, so that he can handle the general hospital purchasing and relieve the administrator of many other time consuming duties.

Service To The Patient—This, the reason for the hospital's being, is in my mind the most compelling reason for a full time pharmacist in all hospitals. First, because the hospital would no longer have to add a handling charge to prescriptions purchased from outside pharmacists. Patients should not have to pay extra for a service they rightfully expect from the hospital. Second, the considerable time saved in compounding prescriptions right in the hospital may very well have a bearing on the patient's comfort and speed of recovery. And, third, the doctor's attitude will be immeasurably improved when he knows what he wants is immediately at hand.

These are just a few of the reasons that have shown me it makes good sense for every hospital to consider having its own full time pharmacist regardless of how small that hospital may be.

If you would like further information on the value of a full time pharmacist, one of our McKesson Hospital Service representatives will be glad to help you. Just write to me: A. A. Mannino, McKesson Hospital Service Department, McKesson & Robbins, 155 East 44th Street, New York 17, N. Y.

The Detailman and the Hospital Pharmacist

From a talk by Sidney H. Willig*

● In a hospital, the key forces in pharmaceutical handling break down into the pharmacist, who dispenses and sometimes manufactures, the doctor who diagnoses and prescribes, and the nurse who administers, the medication.

But the hospital pharmacist serves an additional and vital function – he is a primary source of intra-hospital product information. To him is brought the knowledge of the pharmaceutical representative – the detailman – introducing new medications or supplementing information on old ones. This provides the hospital pharmacist not only with detailed information for his own files, but often, also, places him in the position of having what may be life-saving information in advance of the other hospital staff.

An important area of cooperation between the drug company representative and the hospital pharmacist is the stocking of new products. Medicine is not marching along, it is galloping. This means quicker death for many products, and poses an exasperating problem. However, by cool analysis and by critical drug selection and evaluation, the wheat can be separated from the chaff; and by mutual effort between detailman and pharmacist returns can be minimized as well as expedited.

The hospital pharmacist and the drug company's representative comprise the two major sources of information and explanation to the hospital physician. The combined influence of these can be used to benefit all. As has been recently pointed out by one director of a fine hospital pharmacy, almost a third of the ethical pharmaceuticals are sold to hospitals; and in most hospitals the pharmacists exert considerable influence on drug selection – either directly or through formulary or therapeutics committees.

The medical detailman most frequently projects the conscience of the pharmaceutical manufacturer he represents. This vendor reliability is important when we realize that, today, hospitals receive the largest share of the medical care dollar. Next in order are physicians and drugs. And members of this group – physicians, hospitals, drug manufacturers – also make up the greatest target for malpractice suits.

All over the nation, plaintiff-minded courts have made professional liability a tremendous threat. In the words of the *New York State Journal of Medicine* and *Newsweek*, "Medical malpractice litigation has come of age and is now big business–some 5,000 cases are now being tried each year with thousands of other cases settled out of court."

In our state of New York, the dollar potential of malpractice litigation has been amplified by recent opinions of the highest court of the state which has set forth a new extension of the principle of "foreseeability." Others have extended the doctrines of *res ipsa loquitur* and *respondeat superior* to hospitals in a manner as never before, thus making the hospital vulnerable for the malpractice, errors of omission and commission, bad judgment, failures to observe standards of care, on the part of its employees.

The drug manufacturers, for whom malpractice is generally termed "product liability," are beset by suits that, among the non-ethicals, will change drastically defensive labeling requirements – and among the ethicals will vindicate their high costs for research and controls, for the day of imposition of absolute liability may be here.

It now behooves us all to make certain that acceptable standards are set up, complied with, and maintained. And with as much expert authentication and unquestionable bibliographic backgrounding as possible.

Keynoting our mutual interdependence, a court of appeals in a progressive jurisdiction has recently ruled that a drug manufacturer's brochure is admissible for jury consideration along with other evidence of whether a physician met the particular standard of care required of him in the use of the drug.

The pharmaceutical company wants its detailman to bring to the hospital a true picture of its investment in selected professional research personnel, who have developed a product to fill a medical need according to some special interest and qualification.

In the past, the vast majority of medical detailing in the ethicals was done by registered pharmacists, and selection, background, and regulative licensure contributed to our mutuality of understanding.

Now, while admitting that pharmacy is an excellent and perhaps the best preparation, the expansion of medicine and the concommitant growth of pharmaceutical research and sales facilities point toward a need for recruitment of otherwise qualified personnel.

(*Continued on page* 67)

*Mr. Willig is divisional sales manager for Winthrop Laboratories, Inc. His talk was delivered Sept. 16, before the Southeastern New York State Chapter, American Society of Hospital Pharmacists.

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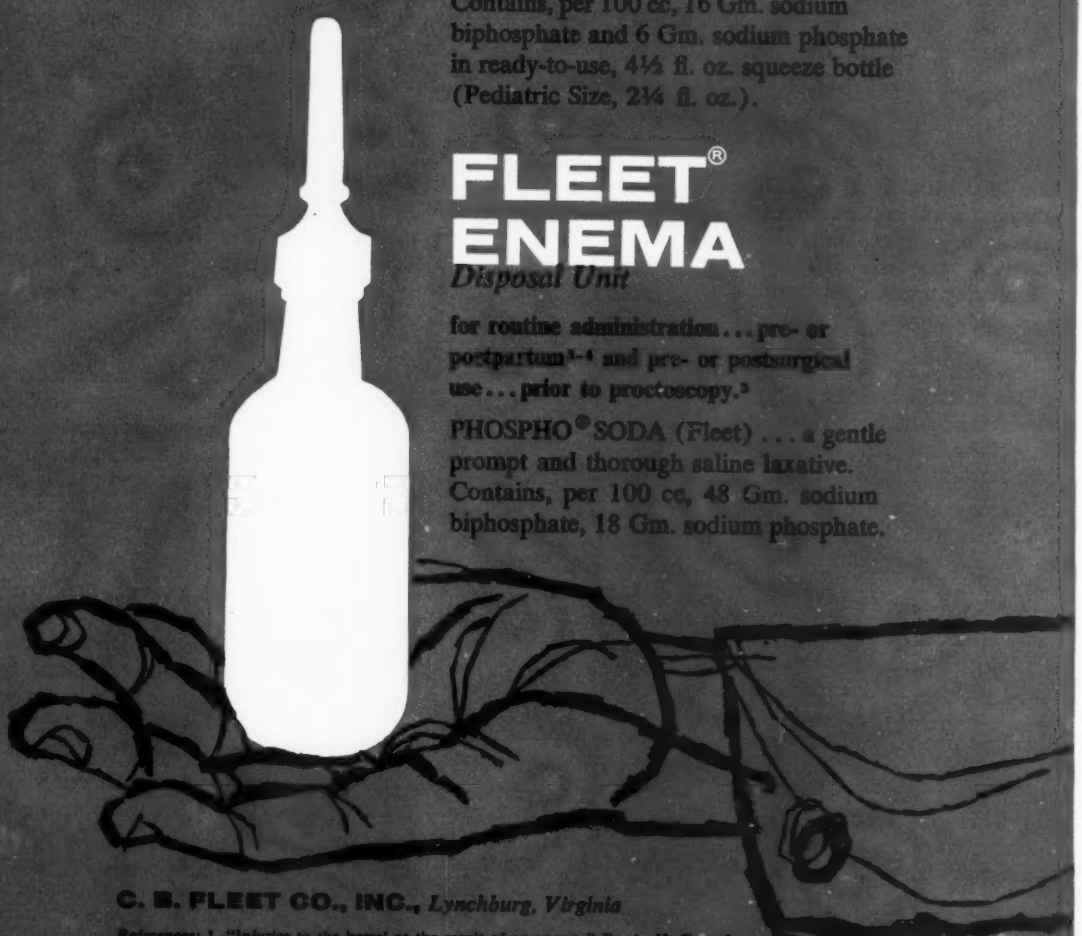
PHOSPHO® SODA (Fleet) ... a gentle prompt and thorough saline laxative. Contains, per 100 cc, 48 Gm. sodium biphosphate, 18 Gm. sodium phosphate.



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There are approximately 200,000 physicians in practice in the United States and about 15,000 reported detailmen.

Organized medicine expresses great concern with the methods by which the physician may keep abreast of pharmaceutical progress, extend and improve his skills, and, at the same time, satisfactorily contribute the gains to our society's well being.

To that end, today's medical detailman is a professional, functioning as a member of the public health service team. Both he and the hospital pharmacist are vital contributors to the educational process, and interdependent as practitioners in a pressure period of medical and hospital practice.

(Papers bearing on the material discussed by Mr. Willig in the foregoing article were among those presented at a recent convention of the American Pharmaceutical Association and its affiliates. Although TOPICS carried a report on this convention, the following papers were held to accompany and perhaps amplify some of the points touched upon here, and to include others of contingent interest to the hospital pharmacist. — THE EDITORS.)

Pharmacist's Responsibility

Quality Drug, Data Must Be Maintained

A great deal of advertising and editorial material is sent to hospital pharmacists by drug concerns; many have expressed the wish for more scientific information. Actually, the hospital pharmacist should have both in order to keep up to date. Papers published in the magazines in the field are excellent, but there is a considerable time lapse due to the backlog common to publications.

Getting scientific information is as simple as requesting it. The brochure on a new product which must be submitted to the Food and Drug Administration is authoritative information which is available to you.

There are several danger spots in the functioning of a hospital formulary which have a place in this discussion. The hospital formulary, which you use daily, can be a great aid to you; but I believe it is sometimes misused, if not abused. It should never be allowed to interfere with or delay patient care. It must not usurp the prerogative of the physician—a tendency which could be a step towards socialized medicine. And it must not be an excuse for the purchase of inferior products.

Few hospitals have adequate laboratory facilities for quality control, and it is only the naive pharmacist who would buy off-brand merchandise in the belief that the FDA would prevent its sale. It is impossible for the administration to test every batch of every product made by a drug manufacturer. Naturally, administration wants you to decrease any deficit in your department, but you cannot risk the possibility of not obtaining full label potency, which is not at all a remote possibility.—*A. H. Holland, Jr.*, vice-president, Cortez-Enloe, Inc.

No One Person

Good Interprofessional Relations Need Help of All

The problems of health care require the services not only of the medical doctor, but other health professionals, all of whom deal in some manner with narcotics, i.e., the physician, nurse, dentist, pharmacist, and veterinarian. The field of public relations for these individual branches has many aspects in common; each needs to coordinate its own program, then integrate it into a program of joint action.

Interprofessional cooperation is needed to inform the public, and we must recognize this interdependence both in our public relations, and in our legislation activities. Here in Cincinnati, we formed an Interprofessional Council in 1956, with these major aims:

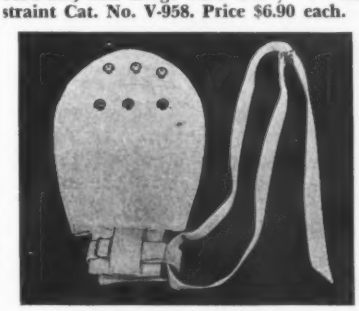
1. Interprofessional assistance. This has taken various forms. For instance, members were experienc-

(Continued on next page)

For Patient Protection

The Posey Safety Belt
Prevents patients falling out of bed. Cat. #S-141, $6.45. (Extra heavy construction with key-lock buckles. Cat. #P-453, $19.50 each.)

The Posey "V" Restraint
A good all-purpose restraint to prevent patients from falling or getting out of bed. Particularly good for use on females as it does not irritate busts. Available in Small, Medium, and Large sizes. Posey "V" Restraint Cat. No. V-958. Price $6.90 each.



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Cat. No. C-212—(both sides flexible) $6.00 ea.—$12.00 pr.
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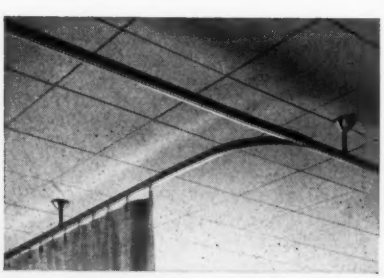

3 DIFFERENT TYPES OF INSTALLATION

The new A.E. Screening can be installed in three different ways: 1. Surface mounted (ceiling type). 2. Recessed-in ceiling (flush mounted). 3. Near-ceiling suspended (dropped from ceiling). Any size or shape of room—in any type of building—old or new—can be completely screened.

ing a long time lapse in receiving payments from the Industrial Commission. A dinner with the members of the committee to bring the matter to their attention, cut down very appreciably on the delay in payments. We followed the same approach with the Aid of the Aged, and though we didn't accomplish as much, the meeting did improve the situation equally for all professions. A meeting with the Narcotics Director of Cincinnati, during which he gave us helpful information on the workings of his department, assisted in resolving interrelations difficulties.

2. *Public relations.* Those who want to destroy individual effort in this country are well organized, and well financed. The fact that we have the best health care in the world today needs to be told. To this end, we have worked collectively to inform the public that good health is a good investment, and decreases the days of disability.

3. *Legislation.* One person working to influence a piece of legislation is a minority. Together, we represent a considerable block of votes which interests the politician very much. Here is just one instance of the effectiveness of working as a group.

A congressman who owned a fish cannery was selling his output to the army. The veterinarian who inspected it declared it unfit for human consumption. The congressman immediately introduced a bill doing away with the Veterinary Corps, stating the army had no need of them inasmuch as it possessed only two mules. Actually, the veterinarians functioned solely as food inspectors, and had never laid eyes – let alone hands – on the mules. The council campaigned to retain the veterinarians, won its point.

We are now working on a family health record, to be distributed by retail pharmacists. The record has places to record dates of birth, immunizations, and medical and dental expenses. It also includes a health record for the family pet, indicating where and when he has had his shots.–*J. Robert Hudson, M.D.,* Cincinnati, O.

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For Diarrhea

Valmycin is being marketed by Moore & Co., Inc., for use in treatment of diarrhea in infants and children.

Each friable, cherry-vanilla flavored tablet contains 60 mg. of neomycin sulfate, 160 mg. of kaolin, and 30 mg. of pectin.

Supplied in bottles of 100 tablets.

Hemorrhoidal Suppositories

Desitin HC, hemorrhoidal suppositories, are recommended by Desitin Chemical Co. in treatment of severe inflammatory anorectal conditions.

Each suppository contains 10 mg. of hydrocortisone, Norwegian cod liver oil, lanolin, zinc oxide, bismuth, subgallate, and balsam peru in a cocoa butter base.

Marketed in boxes of 12 foil-wrapped suppositories.

Otic Solution

Burroughs Wellcome & Co. Inc. announces Lidosporin Otic Solution, combining analgesic, bactericidal, fungicidal, and hygroscopic action, for earache and ear infections.

Each cc. contains 10,000 units of Aerosporin, brand of Polymyxin B. Sulfate; 50 mg. of Xylocaine HCl, brand of lidocaine hydrochloride; and propylene glycol q.s.

Offered in bottles of 10 cc. with dropper.

Muscle Relaxant

Vasodilan, a muscle relaxant for vascular disorders and menstrual cramps, has been introduced by Mead Johnson and Co.

A preparation of isoxsuprine hydrochloride, Vasodilan is marketed as 10 mg. tablets in bottles of 100, and as injectable ampuls with each 2-cc. ampul containing 10 mg. of the relaxant. Ampuls are supplied in boxes of 6.

Antihistamine

White Laboratories, Inc., has introduced Disomer, an antihistamine preparation of dexbrompheniramine maleate.

Available as Disomer Chronotabs of 4 mg. and 6 mg. in bottles of 100; Disomer Tablets of 2 mg. in bottles of 100; and Disomer Syrup of 2 mg. per 5-cc. teaspoonful in pint bottles.

For Muscular Disorders

Ger-O-Foam, manufactured by Geriatric Pharmaceutical Corp., is indicated for massage treatment of musculoskeletal disorders.

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Surgical Spray Dressing

E. R. Squibb & Sons has introduced Rezifilm, a surgical spray dressing indicated for preoperative and postoperative use in preventing wound infections following surgery.

Dressing is a preparation of methacrylate resin with tetramethylthiuram disulfide, an antibacterial agent, in ethylacetate with dichlorodifluoro- and trichloromonofluoromethane as propellants.

Offered in two-ounce aerosol dispenser cans.

New Dosage Forms

A lemon-flavored liquid form of the psychotherapeutic agent, hydroxyzine pamoate, is being marketed by Chas. Pfizer & Co., Inc. Elixir is supplied in one-pint bottles with each 5-cc. teaspoon containing 25 mg. of hydroxyzine pamoate.

* * *

Polaramine Maleate Repetabs, indicated for symptomatic relief of allergic disorders, are being manufactured by Schering Corp. in 4 mg. tablets. Product was previously available in 2 mg. tablets, 5 mg. Repetabs, and Polarmine Syrup.

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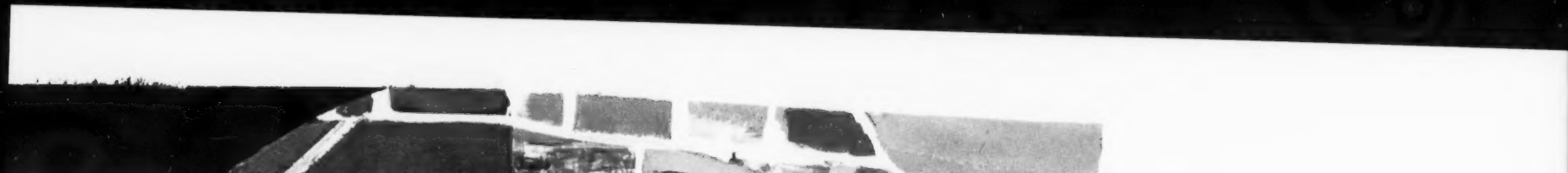

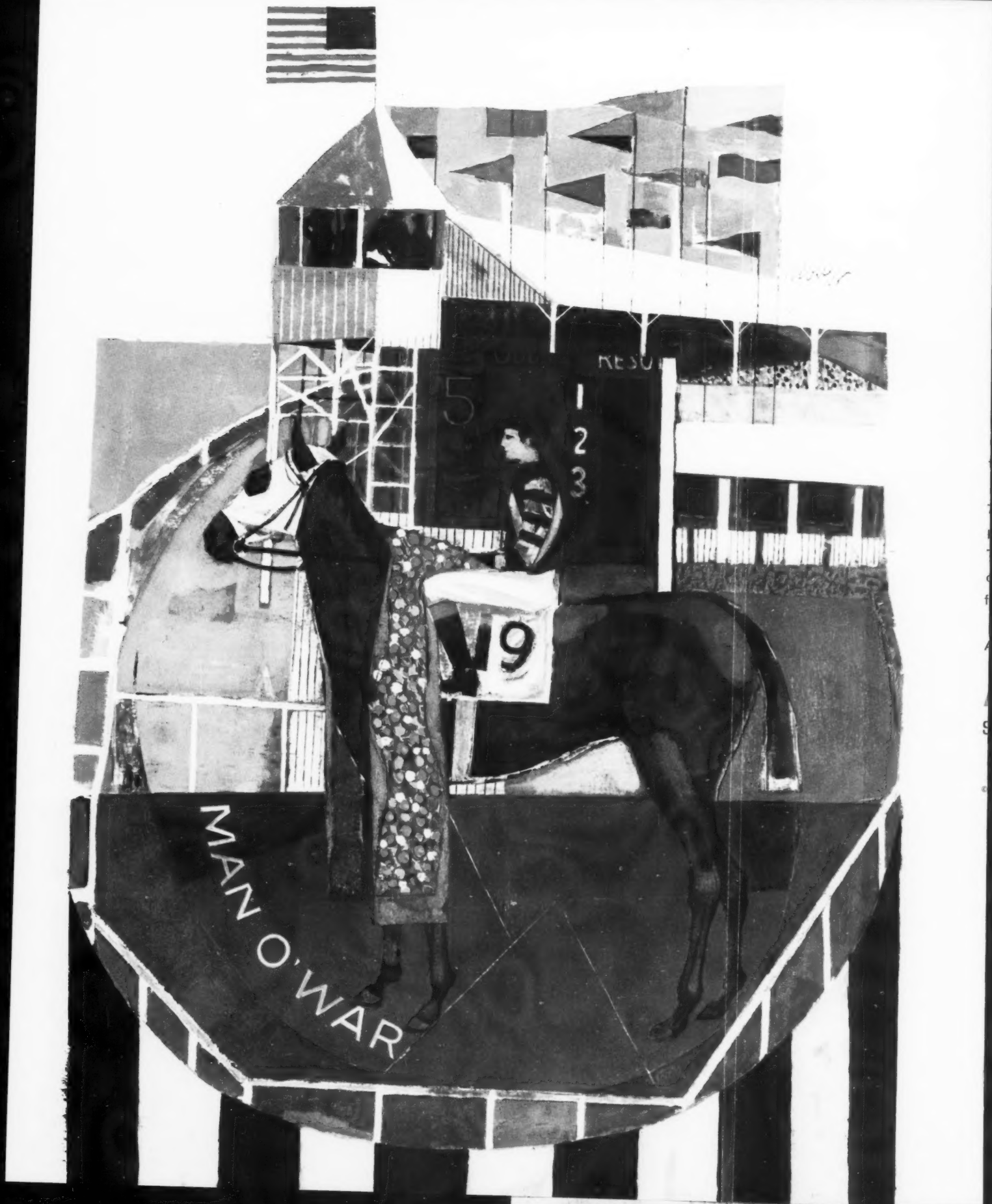
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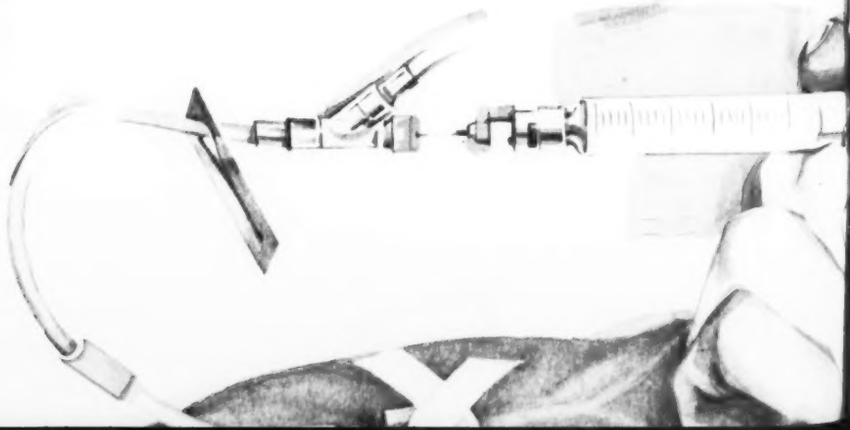

Considerations for the Forensic Pathologist

(There has been a recent upsurge of national interest in forensic pathology as an area in which the hospital pathologist should be informed. A strong reason for this interest is the fear that cases involving criminal negligence or assault may be treated in the hospital under other guises, particularly in the case of children.

The following has been selected from material presented at the recent conventions of the College of American Pathologists and the American Society of Clinical Pathologists.—THE EDITORS.)

Misfire Causes Confusion

"Tandem" Bullets Create Unusual Gun Wound

A 45-year-old woman was shot by her husband in the course of a violent quarrel. The husband admitted to police that he had fired a single shot into her right face, but did not remember any additional shots. The weapon was a .32 caliber Colt, single-action Army revolver.

Autopsy revealed the patient died within 30 minutes of the fatal shot. The bullet fractured the right zygomatic bone and the right sphenoid bone causing a fracture at the base of the skull. The fracture line extended into the sphenoid and ethmoidal sinuses, causing severe hemorrhage. Blood was aspirated into the nose and from there into the bronchial tree. Extensive blood aspiration into both lungs, associated with pulmonary edema, showed that the patient had actually drowned in her own blood.

There was a second tangential bullet wound on the left scalp. Police found the corresponding bullet embedded in the wall of the room.

A third bullet wound in the scalp behind the left forehead appeared to be a long distance shot. The bullet canal was traced through the left side of the skull and through the entire brain, and at its end two bullets were found, one behind the other, one slightly deformed, the other not deformed. This bullet wound was not considered fatal.

The outstanding feature in this case is the phenomenon of two bullets at the end of one bullet canal. All search for a second bullet hole was in vain. After consultation with other pathologists, a misfire was considered and the weapon, cartridges and bullets were carefully examined. This examination revealed that a misfire had occurred. Due to faulty ammunition the first bullet became lodged in the gun barrel. When another shot was fired immediately after, the second bullet propelled the first, and they both left the barrel in tandem, creating a single bullet hole, and a single bullet canal through the brain. The bullet fired first showed a marked indentation at the base where the head of the second bullet had rested.

In the case of a misfire the explosive force of the tandem bullets is much diminished, since some of the energy is used to propel the stuck bullet out of the barrel. The bullet wound had the appearance of a long distance shot, but the shot must have been a close one, since two bullets in tandem would not stay aligned in the air for any distance.—*Leo Lowbeer, M.D.,* Hillcrest Medical Center, Tulsa, Okla.

Hidden Causes Vital

Abdominal Injury May Elude Diagnosis

In some cases the differential diagnosis between traumatic and nontraumatic discontinuity of abdominal organs may present difficulty, particularly when there is no evident injury to the abdominal wall.

The pathologist may be called upon to explain gaps in the bowel wall, to estimate probable duration of the injury, and the character and magnitude of the impact.

Most frequently, abdominal injuries from blunt force center in the spleen and liver; less common, respectively, are discontinuity of the small bowel and injury to the pancreas.

Of 78 cases studied, two are particularly noteworthy to the forensic pathologist. The first, a 42-year-old Mexican, died six hours after emergency surgery; operative findings were generalized peritonitis and discontinuity of the jejunum close to the ligament of Treitz. The patient, an alcoholic, had spent 18 hours in jail prior to his admission to the hospital. Two hours after being jailed, he had begun to vomit steadily. Prior to booking, he had been hit by the arresting officers in an escape attempt.

Autopsy showed extensive generalized peritonitis, with considerable fibrinous exudate, and a transverse perforation in the jejunum about 1.5 cm. beyond the ligament. The bowel wall was not necrotic. Fat necrosis was conspicuous. The character of the exudate indicated that the peritonitis had been present for more than 12 hours, and

(*Continued on page* 77)

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counsel for the arresting officers sought to prove that the injury and the peritonitis condition antedated the arrest by 48 hours.

The jury, however, found that the picture of a man with a jejunal rupture and peritonitis who managed to be violently disorderly and run from the police, and who did not start to vomit until two hours after arrest, was sufficiently incredulous to justify a verdict of manslaughter in the case.

The second case referred to is that of a 19-month-old white illegitimate male who died after four hours of surgery disclosed traumatic complete transection of the first portion of the jejunum, close to the ligament, traumatic transection of the body of the pancreas, and tear of the gastrocolic ligament.

Autopsy revealed a contusion of the base of the left lung and the adjacent diaphragm. The mixed mononuclear and polymorphonuclear exudate showed considerable necrosis.

The child's record of trauma dated from the time, six months previous, when his mother had taken up with a new male companion. Since that time, the child had been beset with a number of "falls," all taking place when he was alone with this person. The grandmother stated that the child had acted afraid of the man in recent months, a conditioned reflex not unappropriate under the circumstances.

This second case is still under active study by the district attorney's office. The mother's friend steadily denies striking the child, although he has failed consistently at the polygraph, especially when kicking is mentioned. Polygraph evidence is not admissible in court, and without an admission of guilt, it might be difficult to present a convincing case. However, the physical facts and the available history seem incompatible with any hypothesis other than that of repeated assaults on the child. If the fatal injuries were all due to one impact, that impact must have been rather broad and correspondingly massive.

These two cases serve to indicate the need for further study of the kind and character of the force required to produce rupture of the proximal jejunum, and of the time sequence of the resulting peritonitis. Such cases challenge not only the diagnostitian and the therapist, but the forensic pathologist and the police force as well.—*Robert W. Huntington, Jr., M. D.,* department of pathology, University of Southern California Medical School, Los Angeles.

40 Percent of Acquittals

Blood Groups Valuable In Paternity Cases

Understanding of the inheritance of genes that determine blood groups, reproducibility of test results, and nature of the blood groups themselves permits the clinical pathologist to present noncontroversial evidence in a disputed paternity case.

A recent statistical survey of paternity cases tried in the New York City Court of Special Sessions showed an increase in the number of such cases from 1,474 in 1952 to 3,941 in 1957. Consistently, only about 10 percent of the accused men deny paternity and demand a trial. Of these, about one-half are finally acquitted. Significantly, about 40 percent of these acquittals result from blood group exclusions. Blood grouping tests constitute the best possible defense to a charge of paternity.

The following table shows the results in 760 cases of paternity proceedings, using ABC, MN, and Rh-Hr Systems:

Total Completed:		
Cases	94	12.5%
Exclusions	94	12.5%
Probability of Exclusion		51%
Total Probable Exclusion	184	25.0%
Total "No Show"	71	
Total Probably Falsely Accused	255	34.0%

The 94 exclusions obtained represent 12.5% of the total tested. The effectiveness of blood grouping in excluding parentage is about 51 percent. The total probable exclusions are therefore 184. To this figure must be added the "no shows," representing 71 instances where the female refused to appear when notified that a blood test had been ordered. Thus a total of 255, or 34 percent of the completed tests represent probably falsely accused defendants.

A group of 67 uncontested paternity proceedings were reported in 1957 by Sussman and Schatkin. These suits had been settled by admission of paternity, awards had been made and the cases had been closed. Subsequent to all court action, the participants were asked to submit voluntarily to blood grouping tests. Results indicated that in six of the 67 cases paternity was excluded. This means that probably twelve of the 67, or in approximately 20 percent of the cases, the man admitting paternity was not the true father of the child.

In the New York City Court study already mentioned, there were 3,941 completed cases in 1957. Of these, 3,521 admitted paternity. This figure must include 20 percent or 700 men who were probably falsely accused. Of the 420 who denied paternity, 140 or 34 percent were probably falsely accused. Thus, a total of 840 of the 3,941 cases (approximately 21 percent) represents falsely accused men, where only 124, or 3.2 percent were actually acquitted.

The enormous cost of erroneous judgments makes any fee for blood grouping tests most insignificiant, and the deterrent effect of having to submit to a blood test would prevent many of these actions from starting. The courts should demand that blood tests be carried out in all paternity questions before the matter is permitted to be brought to trial.—*Leon N. Sussman, M. D., Hematologist,* Beth Israel Hospital, New York City.

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1. Grossman, L.: Archives of Pediatrics, 71: 173—179, June 1954.

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. . . Chicago, October 3-8

Pediatrics

The 28th annual meeting of The American Academy of Pediatrics attracted a total attendance of 3,648 pediatricians practising in the United States, including the new states of Alaska and Hawaii; in Canada, Mexico, El Salvador, Puerto Rico, Chile, Ecuador, Brazil, Venzuela, Argentina; and in the Philippines, Norway, Yugoslavia, England, and Turkey. Industrial exhibitors, who presented their products in 101 booths, are included in the figure, which represents an increase of nearly 650 persons over 1958, and establishes an all-time attendance record. In addition to the industrial exhibits, there were 35 scientific displays.

Seminars and round tables were held October 3rd and 4th, and were limited to members only. General sessions, held daily October 5th through the 8th, were open to all registrants. Specialists held section meetings on allergy, heart and chest diseases, military pediatrics and surgery, and clinic sessions were scheduled in various Chicago hospitals.

James C. Overall, of Nashville, Tenn., president of the Academy, turned his gavel over to William W. Belford, M.D., as 30th president during convention ceremonies. George M. Wheatley, of New York City, was elected vice-president. Dr. Belford, of San Diego, is consultant in pediatrics at the U. S. Naval Hospital, and to the Crippled Children's Service of the California Welfare Department. He serves on the staffs of La Jolla, Mercy, Grossmont, Sharp Memorial and the San Diego County hospitals.

William W. Belford, M.D., left, of San Diego, Calif., having just been installed as the new president of the academy, pins the vice-president badge on George M. Wheatley, M.D., of New York, N. Y.

James C. Overall, M.D., left, of Nashville, Tenn., outgoing president of the Academy, presents the Borden Award to Harold C. Stuart, of Boston, Mass., for "The Search for Knowledge of the Child and the Significance of His Growth and Development."

TOPICS presents herewith selected abstracts from the convention's general sessions:

Surface Cooling

Hypothermic Technic Especially Suitable for Infants and Children

Principle advantages of hypothermia are reduction in metabolic rate and a lowering of the oxygen consumption to about 50 percent of normal at 30° C; reduction in cardiac output; reduction in clotting time, which may prove useful in cases of cardiac disease with polycythemia.

Our clinical experience has been predominantly in the surgical field, but hypothermia does have important applications in non-surgical cases, and should

(Continued on next page)

Executive Board of Directors, American Academy of Pediatrics, are, back row, l. to r.: Drs. James G. Kramer, Akron, O.; Frank H. Douglass, Seattle, Wash.; George H. Schade, San Francisco, Calif.; Clarence H. Webb, Shreveport, La.; Carl C. Fischer, Philadelphia, Pa.; Harold F. Flanagan, St. Paul, Minn.; E. H. Christopherson, Evanston, Ill., executive director. Front row, l. to r.: Drs. William Weston, Jr., Columbia, S.C.; Anibal Arizita, Santiago, Chile; George M. Wheatley, New York. N. Y., vice-president; James C. Overall, Nashville, Tenn., outgoing president; William W. Belford, San Diego, Calif., new president; and R. Cannon Eley, Boston, Mass.

be extended. The suggestion that an infant or small child should not be subjected to the "stress" of hypothermia is negated by our experience, which shows that properly managed, the technic actually protects against stress.

Surface cooling has many advantages in speed and simplicity over other methods: in some cases the temperature has been reduced as much as 5° C in 10 minutes without any signs of disturbance, and it is in no way detrimental to the patient.

We use hypothermia in closure of interatrial septal deficit; pulmonary valvotomy under direct vision; excision of thoracic aortic aneurysm. In the past year, 90 cardiacs, aged 10 months to 60 years, have been operated upon. Of 48 adult cases, 12, or 25 percent, died; of 42 children, 5, or 12 percent, died.

Newborns can benefit from cooling, rather than the tendency to resort to heat. It was found that a litter of puppies could, with the aid of hypothermia, survive an anoxia six or seven times as great as those in normal temperatures. In six cases of newborn humans who failed to respond to other treatment, five responded to 15° C. — *John R. S. Shields, M.B., Ch.B.* (England), department of anesthesiology, Washington University School of Medicine, St. Louis.

Clubfoot Correction

Technic of Reflex Stimulation Corrects Both Structure, Function

Treatment of clubfoot has varied from generation to generation. In the last century, surgery was employed very frequently because the conservative approach gave such poor results, with a high percentage of recurrence.

Currently, two conservative methods are commonly used. The one employs a series of plaster casts, with or without the wedges originated by Kite. It is arduous, requires many cast applications at frequent intervals for six months or more, and does not give satisfactory results in a large percentage of patients.

The second, which we follow, employs the principle of simultaneous correction of both structure and function. This is done by utilizing the withdrawal reflex present in all newborns, and by controlling the direction of the muscular response of the foot by means of an "open" cast in the early months of treatment. At the end of six or eight weeks of treatment, muscle balance has been restored.

The most important, and the unique, feature is the use of reflex stimulation. Since the cast is "closed" medially and "open" laterally, it forces the foot to move in the direction we desire when reflex stimulation is carried out by briskly stroking the plantar surface of the foot with a bare applicator stick 10 or 20 times on 20 or 25 occasions every day. As a result, muscles of the foreleg, especially the peroneal, are able to be exercised pretty much as they would in a normal infant.

Dorsiflexion is maintained for the next few months by, one, a retention cast, and, two, continuous active exercising of the foot by the infant through the use of the reflex stimulation. Scientific exhibit prepared by *Maurice B. Furlong, M.D.*, and *George W. Lawn, M.A.*, Women's Christian Association Hospital, Jamestown, N. Y.

Benevolent Discipline

Pediatrician Can Help Parents Establish Conflict-Free Program

The pediatrician can do a great deal to preserve optimal conditions for establishing a program of discipline. When difficulties arise on the part of either parents or child, he can often detect the cause and correct it, or refer the family for intensive treatment. He does not dictate, for discipline is primarily a family duty and privilege, but he can help the family see the need for obedience, and how to achieve it.

Most parents rather rapidly teach the child rules to protect him from physical danger, but some fail to teach behavior which will protect against emotional hurt and social rejection. Discipline, then, should begin at home, and should have both immediate and long-range value. Training methods should leave as little unconscious conflict as possible so that performance and intellectual activity can be governed by reason and not by inhibiting unconscious processes.

During normal development, the child's chief interest and pleasure shifts in turn from oral to anal to genital activities. If gratification has been

(*Continued on page* 82)

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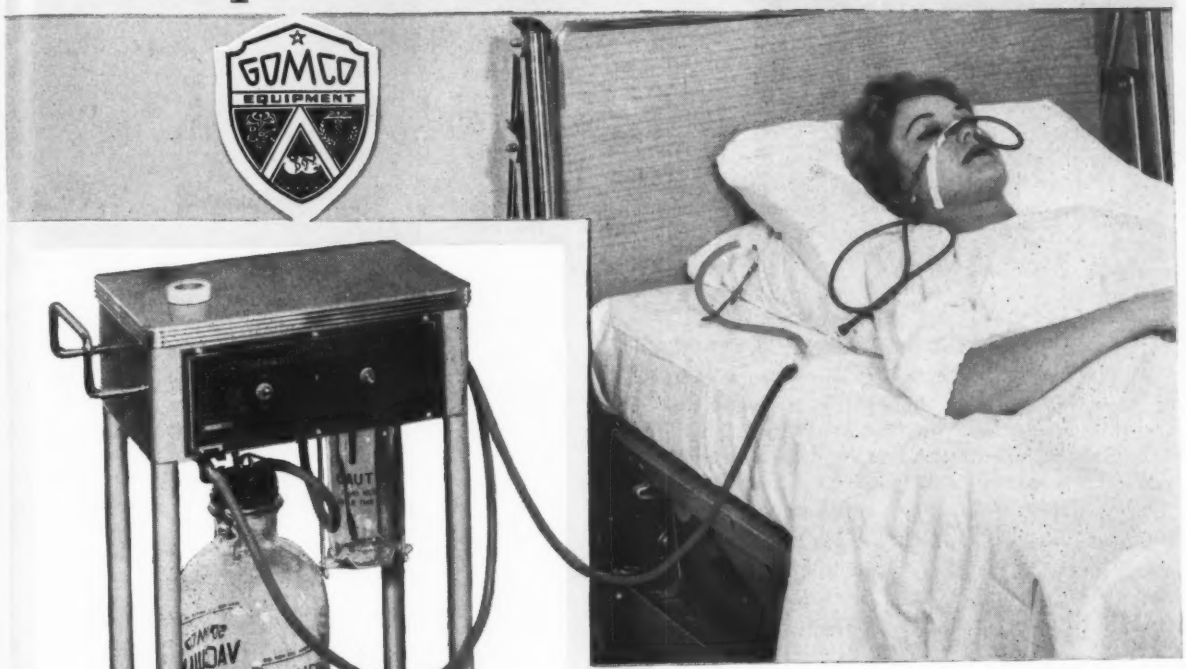

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Recipients of the E. Mead Johnson awards are, left, C. Henry Kempe, M.D., of Denver, Colo., for his "Studies on Smallpox and Smallpox Vaccination," and right, Barton Childs, M.D., of Baltimore, Md., for "Some Observations on Genetics and Metabolic Disease." The awards were made by outgoing president James C. Overall, M.D.

PEDIATRICS

(*Continued from page* 80)

adequate, he is willing to accept inevitable frustration, and looks with hope to equal gratification in the next stage. Actually, "optimal frustration," that is, facing the child with giving up a gratification when he is capable and ready to do so, is necessary for normal growth and development.

Wise parents accept that the child is basically good, and that his desires and impulses are normal, and guide him towards gratification compatible with reality. Knowing what to do, being consistent, and having confidence are the main ingredients for success. – *John F. Kenward, M.D.,* director, Child Psychiatry Clinic, The University of Chicago, Ill.

Allergic Rhinitis

Relationship Shown Between Allergic Conditions and Nosebleeds

Based on a study of 500 children, it was found that nosebleeds were approximately one-and-one-half times more common in allergic children than in normal children, with those most effected having conditions involving the lining membranes of the nose (allergic rhinitis) and bronchial tubes (asthma).

Although the average child observed developed the allergy as early as one year of age, onset of nosebleeds did not develop until the child was more than four years old.

On the basis of positive skin tests, the substances most often associated with nosebleeds were house dust sensitivity, and allergic reaction to pollen, feathers, mold, and animal dander.

A questionnaire sent to certified pediatric allergists showed that 75 percent noted a relationship between nosebleeds and allergic conditions involving the nose, sinuses, and bronchial tubes. – *Roland B. Scott, M.D.,* and *Roselyn Payne Epps, M.D.,* Washington, D.C.

Acute Head Injury

Dread of Head Trauma Can Be Alleviated by Simple, Routine Rules

The greatest fear of head trauma is in not knowing the extent of the injury.

Types of acute brain pathology are concussion, edema, contusion, intracerebral hemorrhage, subarachnoid hemorrhage, epidural hemorrhage (the killer, and the one we most fear), subdural hemorrhage (a slower process we need not fear as much in the early stages, but must watch very closely).

The cerebral edema cycle in children follows a definite pattern: concussion – frequent skull fracture; shock – pallor and apnea; lucidity – variable; vomiting – precipitous; lethargy and confusion; seizure; recovery or decerebrate rigidity. Only 40 percent of the cases show fracture lines. From the point of seizure, 90 percent come back towards lucidity and normalcy. The picture is usually irreversible after decerebrate rigidity.

(*Continued on next page*)

The Clifford G. Grulee Award is presented by Clifford G. Grulee, M.D., left, of Evanston, Ill., to Wyman C. C. Cole, Sr., M.D., of Detroit, Mich., at highlight ceremonies during the convention.

One of the most difficult head injuries to diagnose is acute subdural hemorrhage in the newborn, but these points are helpful: depressed area, Weber's syndrome, sutures separated, and dark blood from subdural taps (which indicates immediate operation).

These simple "Do's" must be routine: establish good airway; control bleeding; start I.V.; type and cross-match blood; control seizure state; record baseline neurological examination (in writing, so that progress can be accurately checked); x-ray when feasible.

The "Don'ts" are obvious to all of us, but they have sometimes been forgotten in the rush: don't fail to treat shock; don't over hydrate or over sedate; don't miss depressed fracture or foreign body; and don't wait too long before consultation.

Hospitalize if there is persistent coma, compound or basal fracture, focal neurological sepsis, otorrhea or rhinorrhea, or if there is an unreliable home situation. — *Martin Peter Sayers, M.D.,* Children's Hospital, Columbus, O.

Complications of Head Trauma May Present Confusing Picture

One of the most unpleasant complications of acute head injury is a leak through the ear or through the nose. One complication we fear, of course, is meningitis. Brain abscess is a very unusual complication, and it is generally missed because previous meningitis has not been recognized. Pressure may not be marked, and the picture is confusing.

Depressed focal signs must not be neglected, nor the possibility of hydrocephaly be overlooked. In the case of an infant with an open fontanel, subdural tap is the best procedure. Chronic vascular thick membrane should be removed; if it is thin and transparent, it may be left in place as long as no reaccumulation of fluids occurs. — *Eugene B. Spitz, M.D.,* professor of neurosurgery, University of Pennsylvania; neurosurgeon in charge of pediatrics, Lankenau Hospital, Philadelphia.

Care of the Unconscious Patient In Severe Closed Cerebral Injury

The care of patients with closed head injury requires a practical understanding of the degree and extent of the brain injury. Accurate evaluation of the changing or progressive physiological consequences of cerebral concussion, laceration, contusion, edema, and hematoma demands repeated clinical assessment.

Rigorous, flexible, and attentive care are imperative for optimal non-operative management, which may be complicated by focal seizures and cerebral atrophy. Cerebral angiography, hypothermia, and intravenous hypertonic urea have been introduced as valuable aids. — *Robert B. King, M.D.,* professor of neurological surgery, State University of New York Upstate Medical Center, Syracuse.

Tranquilizers and Children

Benefits Proven, But Indications For Use Not Firmly Established

With the exception of the advent of antibiotics, no drugs in recent years have so captured the interest of professional and lay people as tranquilizers. And just as we are witnessing the widespread, indiscriminate use of antibiotics, we now see tranquilizers

(*Continued on next page*)

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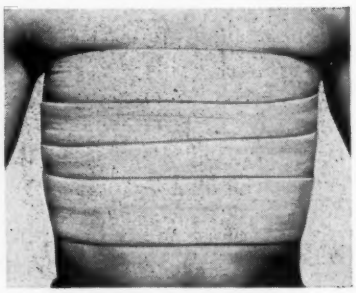

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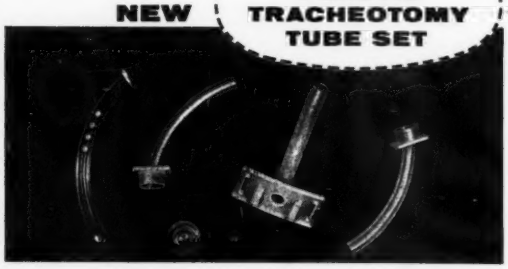

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PEDIATRICS continued

used with little knowledge of their action and potential danger. Major problems which concern the use of tranquilizers are:

1. Our lack of knowledge regarding the manner and degree to which they modify behavior.

2. Our uncertainty as to what we do to children when we prescribe them: whether they are harmful or helpful in the long run.

3. The difficulty in distinguishing benefits from those really due to improved environmental circumstances and favorable effects of optimistic attitudes of those who treat the patients.

4. Prescriptions for outpatients, which make evaluation even more difficult and treacherous, because of variable outside factors.

5. The fact that indications for use are not firmly established.

6. The possibility that long-term reliance may lead to failure to resolve basic causes of psychic disturbance.

7. Our lack of facts as to the extent to which they may interfere with emotional maturation.

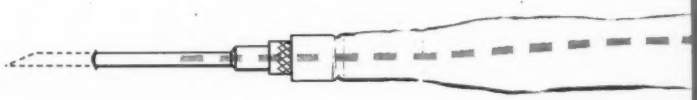
On the other side of the ledger, some major benefits may be cited. Temperate use may make the functionally disturbed child's behavior more acceptable to parents and teachers, facilitating the psychotherapeutic program. Long-term administration to the organically brain-damaged hyperkinetic may so calm the patient as to make management easier. Temporary use may allay anxiety and apprehension incident to hospitalization, operative procedures, and painful diagnostic and therapeutic maneuvers. — *James G. Hughes, M.D.*, professor of pediatrics, University of Tennessee, Memphis.

Psychotic Child More Resistant To Tranquilizers than Adult

The inordinate use of tranquilizers in adults has overflowed into the field of pediatrics. In children, however, tranquilizers do not have the same degree of beneficial effect they apparently do in adults. Though in children with milder behavioral problems they appear to be definitely beneficial, they are useful primarily as adjuvant to other more basic approaches, such as the removal of social and emotional problems.

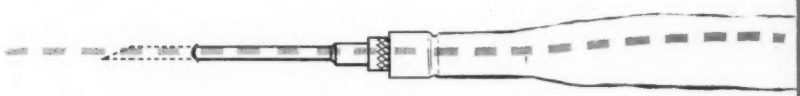
In many of the behavior problems of children one will find that some of the stimulants, such as those of the amphetamine series or one of the monamine oxidase inhibitors, may be more valuable in decreasing hyperactivity than perhaps the tranquilizers. One of the other uses of the tranquilizer is to potentiate the activity of the other drugs of a sedative or anticonvulsant nature which might be given simultaneously. — *Meyer A. Perlstein, M.D.*, associate professor of pediatrics, Northwestern University Medical School; chief of children's neurology service, Cook County Hospital, Chicago, Ill.

HOW THIS INGENIOUS UNIT **SIMPLIFIES** INTRAVENOUS THERAPY



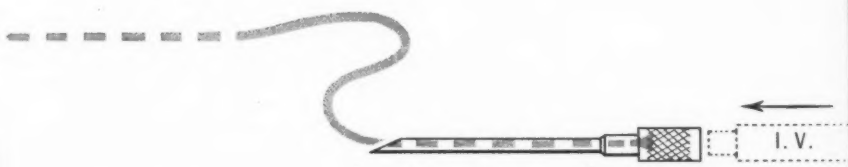
1

Sharp, sterile needle makes venipuncture with minimal discomfort. **Eliminates venous cut-down** and possible sacrifice of the vein.



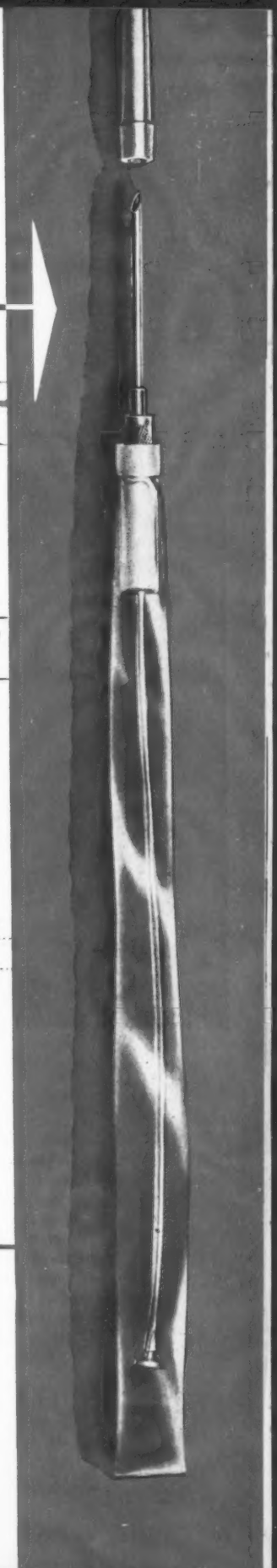
2

Pliant catheter, within lumen of needle, is advanced about 2″ into the vein by simple manipulation. Flexible plastic sleeve protects sterility of catheter. **Eliminates scrubbing and gloving.**



3

Needle is withdrawn, leaving catheter in the vein. The needle hub then becomes an adapter for any intravenous therapy set. **No armboard or other restraint is required** . . . danger and discomfort of a sharp, rigid needle in the vein is avoided. As the Intracath may be left indwelling for several administrations, there is **less trauma, minimized reaction, and the need for repeated venipunctures is reduced.**



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1. Lynn, H.B.: Postgrad. Med., 22:429, 1957.
2. Dancis, J.: Postgrad. Med., 22:194, 1957.

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Surgeons Discuss . .

. . Radiation
. . Staphylococcus
. . Erythroblastosis

(The following abstracts were taken from papers given at the meeting of the North American Federation, International College of Surgeons, held recently at Chicago.)

Some Fears Unwarranted

Benefits of Diagnostic Radiation Outweigh Dangers

The natural radioactivity of the materials of the earth, the radiation from outer space, and the natural radioactivity of elements in the human body itself account for the major radiation exposure throughout the human life. This radiation is not harmful, there is no need for protection from it.

At some yet undetermined level, however, radiation becomes potentially harmful. Genetic damage is considered to represent the threshold level, although the damage may not manifest itself for several generations.

For most people, the medical radiologist will be the major source of radiation exposure. Diagnostic and therapeutic x-rays are fundamental to modern medicine. Control of tuberculosis, management of certain complications and problems in pregnancy, and diagnosis of various anatomic impediments to delivery are areas in which x-rays are directly concerned with the pregnant patient.

In the dilemma resulting from the potential danger on the one hand, and the obvious diagnostic need on the other, the good of diagnostic x-ray far outweigh the bad. Measures can be taken, however, by both radiologist and obstetrician to minimize potential harm.

A mandatory x-ray examination of the chest is a definite part of prenatal care. This examination should be made early in the second trimester, when the sensitive period of organogenesis is over, and the fetus is still a maximum distance from the tissues exposed to radiation. The standard 14 x 17 film is the only acceptable method. Microfilming and fluoroscopy increase the radiation factor from ten to several hundred times.

The problem of diagnostic procedures involving isotopes during pregnancy often comes up. Thyroid function studies and blood volume determinations are the tests most often concerned. It would require about 100 thyroid tests or 300 blood volume determinations to equal the radiation exposure obtained by one pelvic x-ray.

It would be unfortunate to deprive a pregnant woman of life-saving information from a blood volume determination because of an unwarranted fear.

Radiation has no intrinsic hazards. The hazards result from ignorant and careless handling or hysterical fear. There is a danger that this unwarranted fear may impede new medical techniques, especially in obstetrics. — *David J. Lochman, M.D.,* Columbus Hospital, Chicago.

Staph, Strep

Bacterial Infections on Increase In Gynecology and Obstetrics

Infections in gynecology and obstetrics areas have increased steadily in the last few years, and are part of the widespread bacterial infection problem. The emergence of strains of antibiotic-resistant bacteria, notably staphylococcus, and the apparent increase in the number of infections caused by Gram-negative bacteria have combined to intensify the problem of hospital cross-infection.

In gynecology, most infections are caused by the pyogenic bacteria, mostly streptococcus and staphylococcus, and by the gonococcus. Tubercle bacillus accounts for about five percent of the total.

Pathogenic bacteria most often gain access to the female genital tract by way of the vagina, so that the infection is an ascending one. Tuberculous infection is the outstanding exception, being hematogenous in origin.

A typical example of ascending infection is that caused by the gonococcus. First localized in the lower genitalia, the gonococci usually move to the endometrium at the time of the first menses following the onset of infection.

While the streptococcic and staphylococcic infections may also spread by surface extension, they usually are disseminated via the lymphatic and venous channels giving rise to lymphangitis, thrombophlebitis, and pelvic cellulitis. The lymphatics become filled

(Continued on page 89)

EVEN IN "SEEMINGLY HOPELESS CASES" INVOLVING "HOSPITAL STAPH"...

"It would appear, therefore, that from this limited experience with 17 desperately ill patients, parenteral novobiocin [Albamycin] is therapeutically effective and offers a reasonable expectation of a favorable response even in seemingly hopeless cases."

Garry, M. W.: Am. J. M. Sc. *236*:336 (Sept.) 1958.

"Staphylococcal sepsis, particularly as it appears within the hospital environment, continues to represent a serious and difficult therapeutic problem. . . . It would appear that novobiocin [Albamycin], like other broad-spectrum antimicrobial agents, will be of clinical value in a certain number of staphylococcal infections."

Colville, J. M.; Gale, H. H.; Cox, F., and Quinn, E. L.: Antibiotics Annual 1957-1958, p. 920.

The use of Albamycin has not been accompanied by systemic toxicity — renal, hepatic, or hematopoietic. Side effects (such as skin rash) have been minor in nature, and those that do occur are easily managed.[1-3]

1. Garry, M. W., *op. cit.* 2. Editorial, New England J. Med. *261*:152 (July 16) 1959. 3. Nunn, D. B., and Parker, E. F.: Am. Surgeon *24*:361 (May) 1958.

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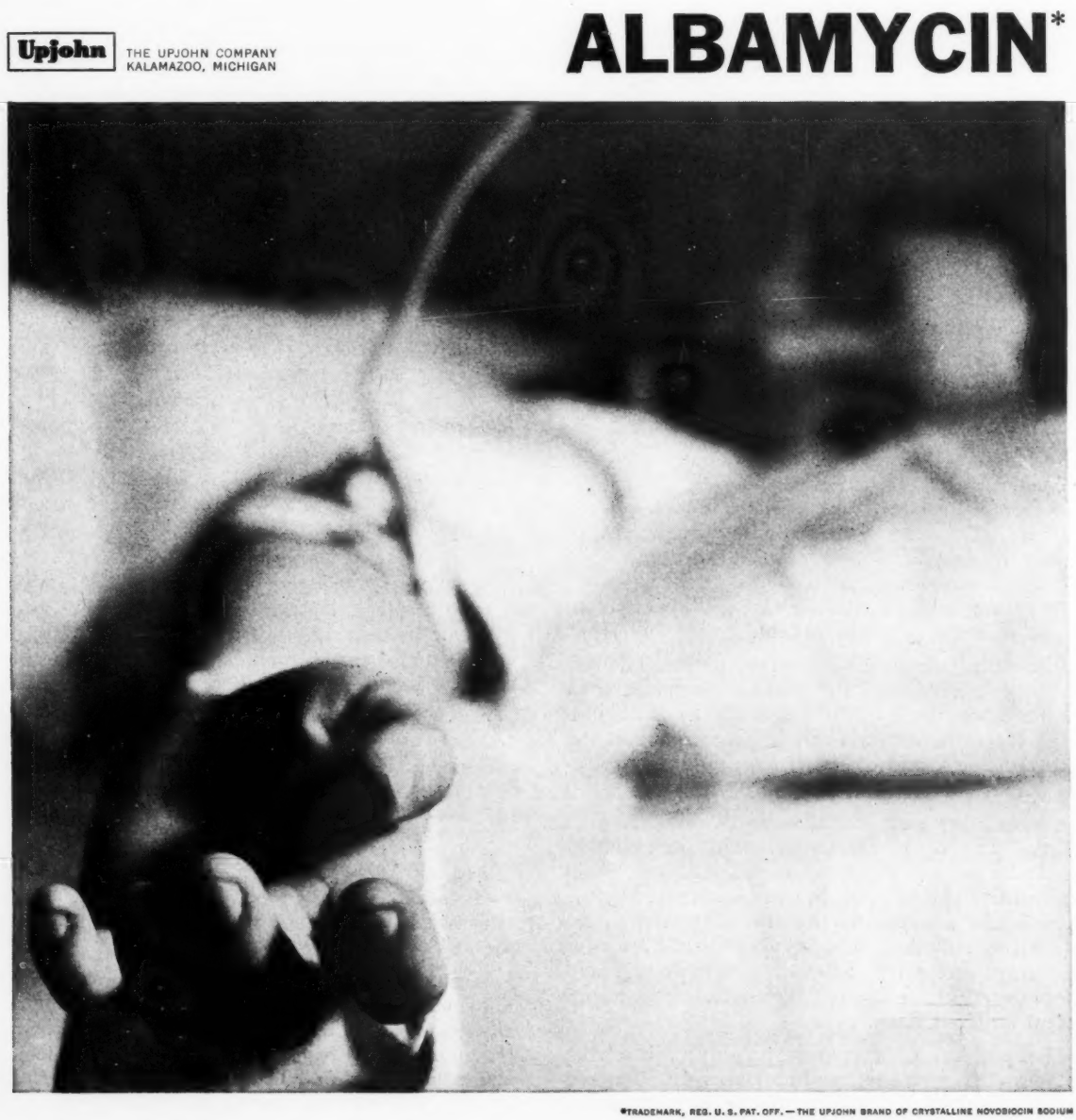
ALBAMYCIN*



*TRADEMARK, REG. U. S. PAT. OFF. — THE UPJOHN BRAND OF CRYSTALLINE NOVOBIOCIN SODIUM

and obstructed with purulent material, the veins become thrombosed, infected and inflamed. Para-uterine, para-rectal, and para-vesical abscesses may form which require surgical evacuation.

If there is an obstruction to drainage of the uterine cavity when infection is present, pyometra may result. The most common cause of such an obstruction is a lesion of the cervix. Two-thirds of pyometra cases are associated with malignancy in the cervix or uterus. The obstruction may be caused by the malignancy itself, or it may have been caused by radiation therapy. — *Magin Sagarra, M.D.,* New York, N. Y.

Fewer Complications

Wheat Germ Oil Effective Pregnancy Diet Supplement

Inasmuch as the two are assumed to be synonymous, the ineffectiveness of vitamin E has caused research on wheat germ oil to be much overlooked. However, it has been shown conclusively that the effectiveness of wheat germ oil is not dependent upon its vitamin E content, but rather upon a crystalline active principle which has now been isolated.

Our experiment with wheat germ oil concentrate involved patients delivered in the obstetric service of the state university medical center. To compensate for the fact that clinic patients are often lax in taking prescribed medication, the women who were delivered during the time of the experiment were carefully screened to exclude those showing signs of erratic use of the medication. The total test population was 1347.

Each patient, upon presenting herself at the prenatal clinic, was assigned a number in sequence. Patients with odd numbers were given one medication, those with even numbers another. The bottles were identical in appearance except for the number on the label. The medications had been bottled, labeled and numbered at the factory, and only the manufacturer knew which bottles contained wheat germ oil concentrate, and which a harmless placebo. The authors did not know until all records were tabulated which bottles had contained concentrate.

Results showed that the group taking the wheat germ oil concentrate had a pre-eclampsia incidence amounting to 8.3 percent, while the control group showed an incidence of 13.2 percent. Postpartum bleeding (500 cc. or more) appeared in 1.5 percent of the medicated patients, and in 2.2 percent of the controls. Gestation periods of under 38 weeks were recorded for only 5.7 percent of the medicated group, while an incidence of 9.2 percent was noted in the control group.

The charts of the babies delivered by the mothers were also reviewed. Babies of the women who had taken wheat germ oil showed immediate respiration and cry in 67.5 percent of the cases, and delayed respiration in 22.7 percent. Those in the control group registered immediate, 62.1 percent, delayed 27.3 percent. Resuscitation measures failed in none of the medicated group babies, but in 0.7 percent of the control group.

The crystalline substance found in the germ of wheat and other cereal grains represents an item in which the modern diet is deficient, since the substance is removed from grain in milling. All of its physiologic activity has not been worked out, but it is fairly clear that the substance improves the ability of body tissues to utilize oxygen and to store glycogen. Thus, wheat germ oil concentrate is of particular value as a diet supplement for pregnant women. — *James B. Patterson, M.D., Wynne M. Silbernagel, M.D.,* Ohio State University College of Medicine, Columbus.

Fetal Red Cells Destroyed

Induction May Be Warranted in Rh-Factor Erythroblastosis

The development of Rh antibodies by the mother causes a change in fetal environment for which there is not as yet a satisfactory answer. Erythroblastosis, or hemolytic disease in the newborn, is caused by sensitization of the mother to a fetal hemagglutinogen which she does not possess and against which she develops antibodies. These antibodies cross the placenta into the fetus and cause destruction of the fetal red cells, resulting in anemia and jaundice. The newborn is unable to cope with the products of red cell destruction.

Efforts to prevent sensitization or neutralize antibodies have been largely unsuccessful. Once begun, the Rh sensitization is a permanent one. In view of this permanency, the importance of Rh compatible transfusions must be emphasized.

With few exceptions a distinct increase in titer in a given pregnancy is an indication that the Rh-positive fetus will have erythroblastosis. Since most intrauterine deaths due to this condition occur during the 39th and 40th week, induction at 38 weeks should be considered. An infant of 38 weeks gestation does as well as one carried 40 weeks.

If a previous baby was stillborn, or a hydrops condition was present, induction at 37 or 38 weeks should be considered, if the husband is homozygous. Sections should be considered only in carefully selected cases. — *Paul C. Gaffney, M.D.,* University of Pittsburgh School of Medicine.

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Pauline R. Young, R.N., Editorial Consultant

Los Angeles AORN Holds Dinner Meeting

Actor Rhys Williams (left) and Mrs. Leon Ames, (c.) share a joke with Los Angeles AORN president Jerry Peers, ORS, University of California Medical Center, at a recent dinner given by the organization. Mr. Williams entertained the assembly with humorous and dramatic recitations. Mrs. Ames is the wife of actor Leon Ames.

Pictured at the speakers' table are Mrs. Ethel West, ORS, Methodist Hospital, Arcadia (Calif.), president, national AORN; Sgt. Robert Short, Los Angeles county sheriff's office; Mrs. Zelpha Burbank, ORS, Hollywood Presbyterian Hospital, chairman of the Los Angeles AORN social committee; and Lester Lackie, head nurse, Los Angeles County General Hospital, vice-president of L.A. AORN. Sgt. Short is assigned to the police department's forgery and check detail, and spoke on the activities of the "Bunco" squad.

Los Angeles AORN Symposium Opens National Institute Program

A series of educational programs under the sponsorship of the Association of Operating Room Nurses will be launched with a symposium on operating-room nursing at the Methodist Hospital of Southern California, Arcadia, on December 4 and 5.

The program is being presented by the AORN of Los Angeles, in cooperation with the national association.

Objective of the symposium is to promote development and growth that will result in better patient care and increased safety for patients and personnel. This institute will serve as a pilot study to provide information on the kind of educational program AORN members would like to have, according to Mrs. Ethel I. West. R.N., national AORN president, and Mary V. Schwendeman, R.N., newly appointed chairman of the educational committee of the national association.

Vivian Warren, O.R.S., White Memorial Hospital, Los Angeles, is program chairman. The program is as follows:

Friday, December 4:

Presiding. Vivian Warren, R.N.

"Planning and Writing of O.R. Procedures" – Jerry Peers, O.R.S., UCLA Medical Center.

"Work Simplification and Principles of Motion Economy" – Mary V. Schwendeman, R.N., nurse consultant, Surgical Products Division, American Cyanamid Co., Danbury, Conn. A problem-solving session will be included in this presentation.

"Principles of Supervision and the Art of Administration" – Nina Craft, R.N., nurse consultant, Los Angeles.

Miss Craft's lecture will be followed by a problem-solving panel on the same subject. Panel members will be:

Moderator: Sister Alexine, O.R.S., Mercy Hospital, San Diego, Calif.

Nurse consultant: Nina Craft, R.N.

Operating-room supervisor: Mrs. Ethel I. West, O.R.S., Methodist Hospital of Southern California, Arcadia.

Administrator: Sister Liguori, R.N., St. Luke's Hospital, Pasadena, Calif.

Director of nurses: Louise Worembke, R.N., director of nurses, Children's Hospital, Los Angeles.

Saturday, December 5:

Presiding: Lt. Cdr. Helen Louise Brooks, R.N.

"Nursing Service Personnel in the Operating Room: Their Functions, Qualifications, Responsibilities, and Attitudes" – Mrs. Harriette Draper, R.N., Mercy Hospital, San Diego, Calif.

"Legal Aspects of O.R. Nursing" – Charles Forbes, attorney, Musick, Peeler and Garrett, Los Angeles.

"Prevention of Staphylococcal Infections" – Mary V. Schwendeman, R.N.

Film showing: "Hospital Sepsis: A Communicable Disease."

Registration for the Los Angeles meeting is necessarily limited to 200 persons each day. The registration fee is $2.50 a day, or $5 for both days. Registration chairman is Bethene Zahm, R.N., Methodist Hospital of Southern California, Arcadia.

Plans for additional institutes will be announced in the near future. Working with Miss Schwendeman on the educational committee will be Vivian Warren; Lt. Cdr. Helen Louise Brooks, U.S. Naval Hospital, San Diego, Calif; Sister Justine, O.R.S., Providence Hospital, Washington, D.C.; and Ruth Pendleton, R.N., director of surgeries and central supply, New England Deaconess Hospital, Boston. A representative from the Midwest will be named soon.

New Technic Promises Rust-Free Autoclaving

By Sister Mary Louise, D.C., and Stephen Conger*

The extent of the problem of rust on instruments used in surgical and dental operations is perhaps one of conjecture or relativity in some situations. In some circumstances, it is likely to be one of proximity. When asked if rust were a problem in his office, one doctor was quick to reply in the negative, but when his nurse was asked the same question, he discovered it was one of her most vexing and time-consuming tasks to keep sterilized instruments free from rust.

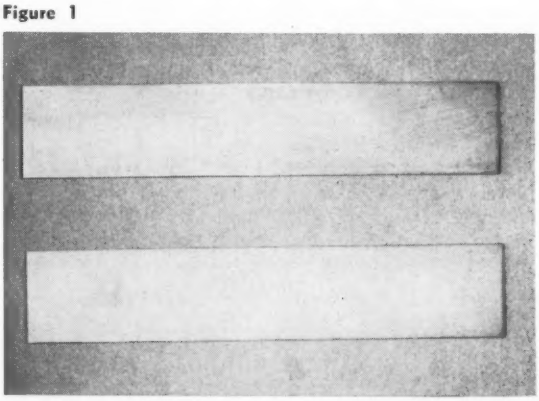
The increase in the development of better stainless steel instruments has no doubt decreased the number of instruments ruined by corrosion, yet the likely persistence of inferior quality of metals, and the difficulty of manufacturing all types of appliances from materials which meet all the demands of the varied uses, seems to indicate a need for continuing efforts to meet the problem of corrosion. Some of the factors involved in this problem are extensively described by Dr. Carl Walter in *Aseptic Treatment of Wounds.*[1]

The practical aspect of dealing with large numbers of instruments and the time-consuming process that may need to be undertaken to overcome the rust problem seem to require a means by which corrosion may be prevented – a means which must be practicable, and not complicated or time-consuming.

Proper cleaning of surgical instruments is especially important in preventing corrosion due to blood, pus, and tissue which may be caught in the locks and hinges, yet even adequately cleaned and "satin-finished" instruments have not completely escaped the slow but no less destructive process of corrosion.

Oxidation of surgical instruments takes place during autoclaving while the instruments are exposed to air, moisture, and heat.[2] Some of this corrosion can be attributed to the water left in the locks after the drying of the instrument. The variation in the incidence of corrosion of the instruments is probably accounted for by divergencies of the mineral content in water from one locality to another. This points up the need to control rust in the wash phase of cleaning instruments.

Figure 1



Tests were made on four galvanized carbon steel strips.

Several methods of protecting instruments during boiling and autoclaving have undergone experimentation recently and promise results. One method[3] has been estimated to be approximately 80 percent effective, while another method[4] which has undergone intensive testing promises to give 100 percent relief from the rust and corrosion problem.

The former method involves the use of oil-in-water emulsion technic which does not hinder the sterilization process. The instruments to be sterilized are first sprayed with the preparation, to prevent oxidation and to provide a lubricant for bearings and gears of rotating instruments.

Repeated tests of this method indicate that although corrosion and rust are reduced to some extent, they are not entirely eliminated, and because of the high viscosity of the oil (silicone) at high temperatures, lubrication is impaired. Although recent studies of this procedure are encouraging, there is still no indication that the oil-in-water emulsion dip prior to autoclaving will yield a 100 percent solution to the problem of corrosion, especially under prolonged atmospheric conditions.

The second method, which has recently undergone extensive testing, attacks the corrosion problem by attacking the atmospheric conditions in the autoclave during and after sterilization. Through a chemical process that ties up the oxygen molecules during the sterilization, preventing reaction with metal, this new preparation lends protection against any oxidation during and for some time after sterilization.

The solution,[5] which does not impair sterilization, is applied to the outer muslin wrapper in the form of a mist-type spray prior to autoclaving. The invisible deposit on the wrapper releases a vapor which inhibits the corrosive action of oxygen during sterilization. Upon completion of the process, the instruments are permitted to dry in their wrappers, and upon inspection after two weeks of storage are found still free of corrosion.

The preparation does not affect the muslin wrappers. They launder just as though the anti-rust solution had not been used.

To determine the bacteriologic safety of the solution, 10 scalpel blades were contaminated with a bacterial spore suspension consisting of *Clostridium tetani, B. anthracis, B. subtilis, and B. megaterium.* In addition to the spores, the suspension

(*Continued on next page*)

*Sister Mary Louise is operating-room supervisor, De Paul Hospital, St. Louis. Mr. Conger is general manager, Lorvic Corp., St. Louis.

contained 10 percent horse serum. The blades were contaminated by immersing them for 15 minutes in the suspension; then they were dried for one hour at 37°C.

After drying, eight of the blades were wrapped in cotton toweling previously treated with the solution. This package was autoclaved for 15 minutes at 121° C. The remaining two blades were not autoclaved, and served as control for the viability and sporulation of the test suspension.

After adequate incubation, both of these blades showed survival of spores, while all eight of the other blades showed no growth.[6]

Skin irritation tests of this product have been done on New Zealand albino rabbits, which have extremely sensitive skin. "No discernible skin irritations" were observed in any of the experimental animals after use of a full-strength solution approximately 1,000 times the concentration obtained when used as directed.[7] Further toxicity studies have not been done and do not seem indicated, because during autoclaving, the solution is disintegrated from its original form, and the residue on the instruments is minute.

Initial tests of the preparation as a rust inhibitor were conducted as galvanized carbon steel strips which were cleaned in hydrochloric acid and then polished with emery cloth to a high luster (see Figure 1). This type of metal was chosen because of its rapid oxidation, which affords a good test in control of the agent employed.

Two strips were wrapped and sterilized in a standard autoclave without the product (Vapor-Phase). These were literally covered with rust upon removal (see Figure 2). Two other strips were then wrapped in a piece of muslin and sprayed with Vapor-Phase. After autoclaving the strips remained exactly as they appeared prior to this exposure to heat and moisture (see Figure 3). This process was repeated five times, and the strips remained corrosion-free.

Figure 2

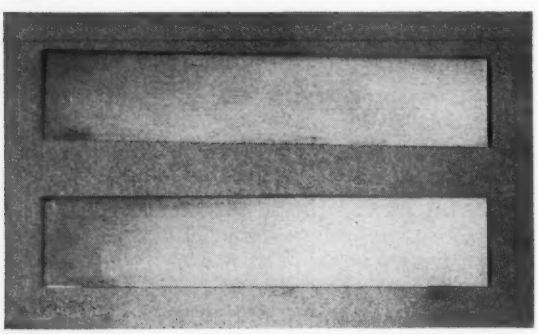
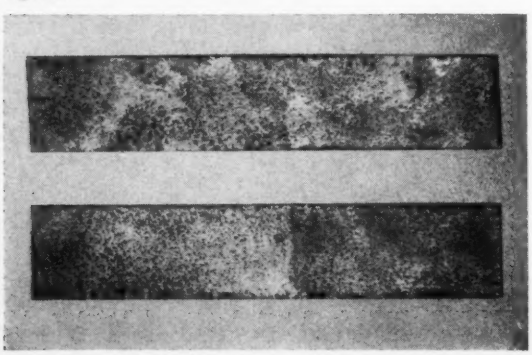


Figure 3



In actual use tests, all types of instruments were autoclaved without regard to separation of carbon steel from stainless steel instruments. The instruments, free from rust, were wrapped in a muslin wrapper, sprayed with the solution, and taped with pressure-sensitive tape. The size of the autoclave, the length of time, or the temperature did not affect the result.

Even carbon steel scalpel blades were found to be free of rust after autoclaving, and there was no transfer of rust to the other instruments when a rusty instrument was placed with a rust-free instrument. Neurosurgical burrs and perforators sterilized in the autoclave with the solution are found to be rust-free and sharp.

Tests indicate that the protection against corrosion is decreased with time. Nonsterile instruments stored in open cabinets can be re-sprayed after two weeks. Sterile, wrapped instruments which are likely to be kept stored in humid atmospheres can be enclosed in an outer polyethylene protector to prevent corrosion or can be re-sprayed before resterilization.

During the process of emergency sterilization, considerable rusting occurs. This can be prevented by spraying the instruments directly with the preparation or by placing a sprayed cloth in the autoclave with the instruments. The exact amount of the solution is not mentioned in quantity. Experience indicates that about two or three sprays from the polyethylene container will supply enough of the solution to provide for each set of instruments in each sterilizer load. The volume of sterilizing will determine the quantity in a particular situation.

Experimentation thus far has indicated that a solution to the costly rust and corrosion problems of moist-heat sterilization may be at hand. A new approach, both simple and relatively inexpensive, which treats the atmosphere rather than the instrument, has been found effective. Moreover, sterilization has not been impaired, and the formula is nontoxic.

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Fractures, Transfusions, Hernia in Newborn Among Topics in ACS Postgraduate Courses

The following abstracts are taken from selected lectures given during the postgraduate courses at the 45th annual clinical congress of the American College of Surgeons in Atlantic City, September 28-October 2. A report on papers from other congress sessions appears on pp. 20-26.

Treatment of Fractures

Avoid Metal Implants If Possible; Know What Reactions to Expect

The use of metal implants should be avoided unless it is absolutely necessary. However, when it is, every surgeon inserting metal into a patient's body should know enough about corrosion and metallurgy to anticipate the body's reception of that metal.

Three factors are essential for corrosion: an anode, a cathode, and a solution of electrolytes. If any one is not present or is blocked, corrosion is not possible. The human body, like a battery, furnishes all three.

A scratch on a surface of a metal insert can act like a dissimilar metal – it will be anodic to the area surrounding it, and corrosion will result. The more homogenous the surface, the less the likelihood of electrolysis.

Bonding an oxide or oxygen layer to a metal surface renders it corrosion-resistant. If anything interferes with its contact with oxygen, corrosion results. When a piece of metal is bolted to another, an area of low oxygen content is created with higher oxygen in the surroundings, and corrosion results at the bond. Nesting fracture plates together invites this kind of trouble.

There is no relationship between the action of metal in one environment and its action in another. For example, tantalum, which is highly resistant to chemical solutions in industry, was thought to be an ideal substance for body inserts. Yet it was found that in the body tantalum disintegrates completely, with great tissue reaction. Each metal must be tested in the environment in which it is to be used.

Great care is necessary in handling devices of Type 316 stainless steel. If a 316 implant is scratched at the operating table, the unrelieved stress may not be covered and corrosion may result. Manufacturers who insist on stamping trademarks on implant devices should anneal the stamped surfaces.

Use of cobalt-based alloys such as Vitallium increases the ultimate cost of the device, but corrosion resistance is high throughout the device as well as on the surface. Any damage caused during insertion is less important. The brittleness formerly common to these alloys has been overcome by the addition of iron to the formula.

Titanium is an excellent metal from the standpoint of corrosion resistance. Recently developed alloys have overcome stress failures.

Zirconium appears to be more inert and corrosion-resistant than titanium but has not been used very much to date in implants.

Magnesium has been abandoned because of the severe tissue reaction that results about plates and screws fabricated of this metal.

Certain nickel alloys appear to be possibilities for future investigation.

Because metal transfer is an important cause of corrosion, all tools used to handle implants should be of the same composition as the implant. Rubber tips may be used to protect one metal from contact with another. Metal racks for holding screws and plates may also make implants dangerous. Screws and plates should never lie loose in a drawer. They must be wrapped and kept from traumatic contact with each other.

Implant design should be organized to eliminate stress corrosion. Hardware-store metal appliances must be banned from the operating room.

Previously used appliances are full of stresses and have damaged surfaces. They must not be used again no matter how strong the economic inclination. – *Albert B. Ferguson, Jr., M.D.*, Pittsburgh, Pa.

Use of Fixation Devices Should Be Individualized

It can be assumed that any fixation device periodically provides trouble. So often, however, it is not the device that is at fault as much as the talents of the person employing it. The use of any internal fixation unit must be backed up with good reasons. Personal opinion and experience determine which device is best for the situation.

Fractures are individualized. Surgeons and their capabilities should be individualized and the use of internal fixation devices individualized according to surgeons' abilities. – *George J. Curry, M.D.*, Flint, Mich.

Fractures Heal Despite Internal Fixation, Not Because of It

"Immobility" should be discarded from the language of fracture treatment. There is no such thing as actual immobility. "Stability" is a more accurate and meaningful term.

Fractures heal not because of internal fixation but in spite of it. No metal appliance will take the

(Continued on next page)

place of osteoblasts, and youth is the only factor affecting the healing of bones. Bones are physiologically active, and the best physiologic pressure is that exerted by the muscles of the individual sustaining the fracture.

For fracture healing there must be contact, compression, and continuity of parts. Distraction in a fracture means non-union. Metal cannot be depended on to support a fracture. Plaster support is necessary so that osteogenesis can go on. Although there is no physiology in metal, 80 percent of fractures with internal fixation get well. — *G. W. N. Eggers, M.D.,* Galveston, Tex.

Success Reported with Plastic Material for Internal Fixation

Fifty-six fractures have been repaired with polyurethrane foam adhesive. Results are excellent in 39; good in 11; and fair in two. There were four complete failures, of which three were preamputation cases.

The technic is not complicated, but definite skills are indicated in handling the substance. Conservatism in treatment is important. The polyurethrane has strength and adhesiveness; it permits early ambulation and provides a lattice in which new bone can form. In 48 hours, polymerization is complete. — *Michael P. Mandarino, M.D.,* Philadelphia.

Blood Transfusions, Allied Problems

Urges Selection of Blood Components To Treat Specific Conditions

Just as specific antibiotics are selected for specific organisms, so should single blood components be selected to treat specific conditions. Only hemorrhage and traumatic shock require the infusion of whole blood.

Too often, unnecessary components in whole-blood transfusions represent both waste and an overloading of the patient's system. In the past, it has not been easy to be selective of components, but today many fractions are available.

For example, hospitals can prepare their own packed red cells. These are valuable in treating preoperatively patients with valvular heart disease, and in medical management of patients with leukemia and bone-marrow hypoplasia, and are indicated in treatment of the occasional patient who is harmed by volume expansion resulting from whole blood.

Packed cells must be administered within a few hours of preparation because of the possibility of introducing bacteria. Much of this limitation can be removed by using plastic bags for separation.

Freezing of red cells will revolutionize blood-bank technics. Transfusion reactions, particularly pyrogenic and urticaric, will be eliminated. Waste from outdating will end; red cells can be stored for at least three years frozen and 10-14 days after thawing, for typing, crossmatching, etc.

The rate of removal from freeze lockers can be related to demand, so that frantic appeals for rare types will become unknown; frozen cells can be resuspended as packed cells or as whole blood; the individual awaiting elective surgery can accumulate a supply of his own blood.

Concentrates of human platelets are now available and are indicated for bleeding related to a platelet deficiency. The platelet count per se is never treated because many patients develop profound thrombocytopenia without bleeding. The dosage is adjusted to clinical requirements. Severe thrombocytopenic bleeding requires three or four units of preserved or fresh platelet concentrate. The effect is short-lived but will tide a patient over for a day or two. Side-effects are rare.

Plasma fractions are mandatory in treatment of the patient with hypofibrinogenemia and irreversible hemorrhage. There is only 200 mgm. percent of fibrinogen in a unit of whole blood, whereas several grams are actually needed for the patient bleeding on the basis of hypofibrinogenemia.

When unexplained bleeding is encountered in thoracic surgery, in genitourinary surgery (especially prostatectomy), in leukemia and after incompatible blood transfusions, hypofibrinogenemia should be suspected. Chemical determination will confirm the suspicion. The normal percentage is 150-250 mgm.; the patient will bleed at 75 mgm. percent or less.

Chemical determination takes time, of course. A simple bedside test can be used to corroborate the suspicion quickly. A bottle of thrombin is dissolved in any diluent — saline or distilled water. The final dilution should give an easily measurable unit in one cc. of solution. Two cc. of the patient's blood are withdrawn and put in any anticoagulant, and one cc. or one unit of the thrombin mixture is added to the blood and mixed gently.

If the blood clots in 15 seconds or less, there is no need for concern. If the patient has 50 percent fibrinogen present, the blood will clot in 30 seconds; if 25 percent or less fibrinogen is present, the blood will clot in 45 seconds. If there is no clotting after 45 seconds, intravenous fibrinogen must be ordered promptly. — *James Lyman Tullis, M.D.,* Brookline, Mass.

Wants More Surgeons to Run Banks; Lists Problems in Massive Transfusions

Surgeons are the best customers of blood banks and should have more interest in transfusions and the operation of blood banks. Indeed, it would be a good thing if more surgeons ran banks. The surgeon has the best opportunity to establish good rapport with the potential donor and uses 60 to 70 percent of all blood collected.

When massive transfusions are given, it is often difficult to know when to stop the infusion. Merely bringing the systolic pressure back to normal may not be effective. Blood-volume determination is

helpful, but when the patient is on the table, bleeding, there is seldom time to wait for the answer. In the absence of acute cardiac failure, good clinical judgment of venous pressure is probably the best index for measuring blood volume at any time. If a patient who is lying flat has full and distended neck veins, there is certainly no hypotension.

Chemical imbalance often accompanies massive transfusions. Shifts in ions take place. Potassium leaks out of the red cell into the plasma in stored blood. Sodium citrate, the anticoagulant in banked blood, is a loose binder of calcium. Potassium and calcium are two antagonistic ions. Often when a patient in profound shock is infused with stored blood, his blood pressure may rise and then fall off. Even though blood replacement may be sufficient, the patient may go into cardiac arrest or fibrillation. The patient receiving massive transfusions should also receive calcium, especially when the heart pump or perfusion apparatus is used.

When a patient oozes into a previous dry wound or bleeds into an area of previous trauma and a transfusion has been given, a transfusion reaction should be suspected. — *Ivan W. Brown, Jr., M.D.,* Durham, N. C.

Surgery an Extreme Emergency Once Newborn Hernia Is Diagnosed

There are many differences to consider in treating the newborn with diaphragmatic hernia contrasted to treating the older infant with the same anomaly. There is almost never a confining sac when the hernia is found in the newborn; hence, all the abdominal contents may be within the pleural cavity, and because the hernia is unconfined it is more likely to involve all the abdominal contents.

The newborn is usually brought in because of marked and progressive cyanosis and dyspnea; vomiting is rare. Abdominal examination is important. The abdomen is often scaphoid rather than protruding. Respirations are difficult and rocking in nature. The chest expands and the abdomen sucks in; there is alternate rise and fall between the two. X-ray diagnosis is made and then surgery is an extreme emergency.

In older infants, in whom the hernia is enclosed in a sac, surgery can be elective, but in the newborn, it is a true emergency procedure. If only a small amount of abdominal contents is found in the thoracic cavity, which is indeed rare, the thoracic approach may be justified. Otherwise, the abdominal approach is the only logical one to repair in the newborn, because it is difficult to get all the organs out of the chest and into an abdomen which has never had to accommodate them. There may be malrotation of the colon, which cannot be observed through a thoracic approach. It may be necessary to stretch the abdominal wall to close it over its new contents.

At surgery, the lung which has never had opportunity to expand may appear as a small purplish nubbin of tissue. Gentle expansion by the anesthetist is desirable, but the lung need not be expanded all the way. — *William L. Riker, M.D.,* Chicago.

Quick Action Essential in Treating Staphylococcal Pneumonia in Infancy

Staphylococcal pneumonia in infancy is an acute fulminating illness. The onset is sudden. X-ray examination is essential and prompt treatment is imperative if the infant is to survive.

A child will have a history of a cold or other nonspecific infection, treated with antibiotic (usually tetracycline or a derivative); there will seldom by cyanosis; the temperature may be up to 106°; the respirations will be 80 or 90; the nostrils will be flaring; breathing will be forceful and grunting in character.

The child may actually be referred for treatment of intestinal obstruction because of the abdominal distention that is present. The diagnosis of staphylococcal pneumonia will be unexpected and the infant in extremis before the diagnosis is made. Oblique films and films with the infant in an erect position are invaluable in confirming the diagnosis.

When a fluid level is found in the chest, the physician must move rapidly. Thoracentesis is done using careful aseptic technic and local anesthesia. A large quantity of thick pus is usually found in the pleural cavity, sometimes as much as 50 or 100 cc. Suddenly, air is encountered, and the physician should be prepared to insert a catheter for constant suction drainage.

The catheter should be no smaller than a No. 10. A small incision is made over the site of the thoracentesis; the tissues are spread apart and the catheter is inserted into the pleural cavity. A pump may be necessary on the suction apparatus to keep ahead of air leaks. The child may have to remain on suction for two or three days, and must have constant nursing care for that period. He is more easily controlled in oxygen tent, high humidity.

Transfusion may be necessary. Fluids are given by mouth if possible. Blanket antibiotic therapy is instituted until cultures and sensitivity studies make apparent a specific regime of therapy. If the surgeon or physician temporizes with just a change of antibiotic or simple thoracentesis, the infant is doomed. If there is the slightest suspicion of air in the chest, a catheter must be inserted.

This is a primary disease of the lungs with an acute pneumonic process. Multiple abscesses may develop, and bronchopleural fistulae may form slowly or may very suddenly rupture in large numbers. The organism is almost always the coagulase-positive staphylococcus, phage type 80-81, resistant to penicillin. Chloromycetin, erythromycin, novobiacin and bacitracin appear to be effective. — *Charles L. Minor, M.D.,* Philadelphia.

Discussion

Q. If Varidase is used in the chest catheter, how does one keep the pump from removing it?

(Continued on next page)

DR. MINOR: This treatment is not usually started until the infant is stable and there is very little drainage. The tube is clamped off while the Varidase is instilled.

Q. How much more frequently are infants admitted to the hospital with this disease as compared to the number of cases that develop in the hospital?

DR. MINOR: Almost all cases are admissions from outside. The disease does not appear to develop in the hospital.

Q. Is chronic empyema a common sequela to the disease?

DR. MINOR: To date, it has not been seen.

Q. Why is suction drainage used instead of a simple underwater seal type?

DR. MINOR: The air leak is so massive that a simple water-seal apparatus is not adequate.

Q. Are antibiotics instilled in the chest tube?

DR. MINOR: Usually not.

Q. Is there any peak of age incidence?

DR. MINOR: The peak appears to be three to seven months.

Q. Is decortication usually necessary?

DR. MINOR: To date, it has not been.

Q. How long is the thick coating seen on the visceral pleura?

DR. MINOR: After recovery from the pneumonia, it is usually three to six months before the chest is perfectly clear.

Delay Gallbladder Surgery Unless Diagnosis Clear-Cut

Gallbladder disease is an old and recurring problem accompanied by many changes in ideas of treatment. Experimental studies can show that gallstones will develop in the presence of stenosis, narrowing or disease of the common duct.

In the laboratory animal, stricture of the lower end of the common bile duct may result in the formation of stones. In man, there is a high incidence of narrowing of the lower end of the common duct in the presence of gallstones.

Stenosis of the sphincter of Odii is not a primary cause of gallstones in man. When seen in association with gallstones, it is usually secondary to biliary infection or pancreatic disease.

There are still reasons to assume that metabolism and dietary habits figure in the development of gallstones.

A high alkaline phosphatase has been thought of as a manifestation of obstructive jaundice, but this is not necessarily true because a patient may have no jaundice and still have a high alkaline phosphatase. In laboratory-produced strictures, the animal will have a high alkaline phosphatase but no jaundice. In man, there is no marked elevation of alkaline phosphatase or hepatic disease with gallstones.

A high alkaline phosphatase, however, does indicate an inflammatory change in the biliary tract, and justifies exploration of the common duct. It may be associated with obstruction but is not merely an obstructive manifestation. The alkaline phosphatase is helpful in diagnosing the patient who has had cholecystectomy and has vague symptoms.

Care of the patient with the asymptomatic gallstone is an open question. It is hard to know exactly at what age one should consider surgery. There is certainly no indication for surgery in the young patient. Gallstones can develop in a person born without a gallbladder; therefore, cholecystectomy in young adult life is no guarantee that stones will not develop in the common duct subsequently. In older patients with a large, single asymptomatic stone, surgery may prevent a gallstone ileus or manifestation of gallbladder disease later in life.

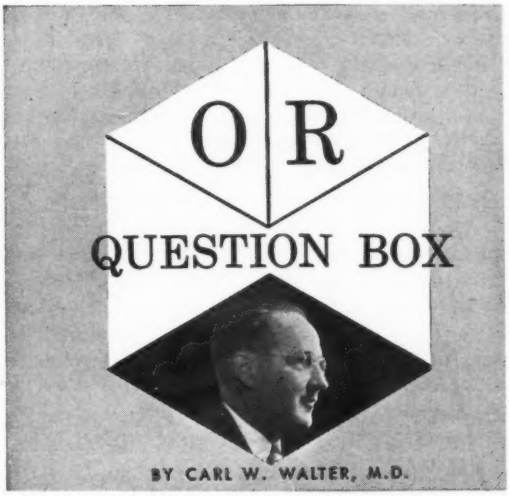
Surgery should not be forced on the patient. Chances of future trouble should be discussed. There is about a 50 percent chance of trouble within 10 or 20 years. Once symptoms appear, there is no argument — surgery is performed.

Treatment of the acute gallbladder is more definitive. When the diagnosis is clear-cut and a tender, inflamed gallbladder can be palpated, early surgery is indicated. This does not imply emergency surgery but surgery at the earliest convenient time for patient, surgical team, and anesthetist.

If the diagnosis is not clear-cut, the surgeon should delay. There is increasing frequency of biliary-tract disease following coronary-heart disease. It is wise to wait until the patient's other disease processes surrender to control and he is strong enough to withstand surgery. If he has obvious gallbladder disease, is in the older age group, and gets sicker while under observation, a cholecystostomy should be done. This will carry the patient through the acute phase of his disease until his various systems can withstand the onslaught of 1.5 to two hours of surgery.

Drainage is the first stage of a two-stage operation. It is an especially good procedure in the elderly, obese, hypertensive or cardiac patient. Local anesthesia is used whenever possible. Biopsy can easily be done at the same time and should be a routine procedure every time a gallbladder is opened. It may also be possible to remove a stone at that time.

A cholecystocholangiogram is done through the tube two to three weeks later. If no stone is obvious, the patient should be released. In younger patients, cholecystectomy will be inevitable, but in older patients, the chances of trouble within five years are less than 25 percent. — *J. Englebert Dunphy, M.D.*, Portland, Ore.



Assisted by Dorothy W. Errera, R N.

Q. Who do you think should check oxygen equipment which is kept in the central supply room?

A. The anesthesiologist is the logical person to establish standards for testing and maintenance of this equipment. The actual duty can then be assigned to any responsible person under the direction of the supply room supervisor.

Q. Our anesthesiologist would like to have a stop cock inserted in the intravenous tubing at a height more convenient for him to work with. I have insisted it should be at the level of the needle, but I am not very convincing.

A. It is important to locate all control devices on infusion tubing at the level of the intravenous needle so that positive pressure exists in the tubing. When the clamp is located high on the tubing it creates an obstruction, and a negative pressure develops distal to the clamp. If the infusion set has a leak due to faulty manufacture or a needle puncture, it is enough negative pressure to aspirate air into the tube. This can cause air embolism of significant quantity.

Q. Can plastic airways and plastic drapes be used safely in an operating room in which only oxygen and nitrous oxide are used? Our floors are not grounded.

A. It is not the gases you use that create the explosion hazard. The hazard accompanies the use of combustible anesthetic agents which form flammable mixtures with the gases - air, oxygen, or nitrous oxide. These anesthetic agents are typified by cyclopropane, divinyl ether, ethyl chloride, ethyl ether, or ethylene.

The floor in your operating room is "grounded" during construction because of the grounded conduits and water pipes. The point you need be concerned with is its "conductivity." A conductive floor electrically connects persons and objects and prevents an accumulation of electrostatic charges. An approved floor must have a specified resistance to eliminate the shock hazard from accidental contact with improperly insulated electric cords.

There is no hazard to the use of plastic drapes in the operating room because they are handled by gloved individuals electrically connected with the conductive floor. The static electricity generated by handling the plastic drape is bound and hence is not free to cause a spark as it is placed on the field. This complicated concept of physics is well explained in a film, "Fire and Explosion Hazards," made by George Thomas, M.D., and available from Ideal Pictures in Chicago.

Plastic airways are a hazard because they will isolate the patient from the conductive anesthesia apparatus unless precautions are taken to provide electrical contact between the conductive mask and the patient's skin.

Q. If a patient with known pulmonary tuberculosis has an abdominal operation, is the entire operating room considered contaminated?

A. With an established routine that enforces terminal sterilization of all instruments, safe routine for disposal of soiled linen and a regular program of floor disinfection, this kind of case presents no more problem than that incidental to particular terminal disinfection of the anesthesia apparatus, the anesthesia machine, and the patient's pillow. Cleaning should be done with a detergent-germicide of known tuberculocidal activity. Examples of good tuberculocides are 70 percent ethyl alcohol, 70 percent isopropyl alcohol, the aryl phenolics, and iodophors.

Q. Our E.N.T. specialists use a telescoping lamp with a goose neck and a head mirror. The switch is removed from the lamp, and the plug is connected to an electric outlet with a locking device. This is 5½ feet from the floor. Even with these precautions, the district engineer will not pass this light. Can you tell me what more we must do to have this piece of equipment approved?

A. The inspecting engineer is not being unduly critical. He is doing a whole job where you have done but a part. The switch and outlet on the lamp may have been adapted for safety, but the very design and structure of the lamp militate against its safe use in a hazardous area. The bulb is unprotected; it is exposed, and it is too hot. If it should break or be accidentally unscrewed, a dangerous spark would result.

The fragile nature of the goose neck and bulb socket invites disaster. Portable equipment in this category must be of explosion-proof construction. This means that the bulb socket and wiring must be enclosed in a heavy housing that will contain an explosion inside itself if perchance anesthetic gases should gain entry. See section 5-11 of Bulletin 56 of the National Fire Protection Association, "Recommended Safe Practice for Hospital Operating Rooms."

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By Dorothy W. Errera, R.N.

Sauer, Louis W.: "Innovations in Hospital Care of Newborn Infants," *J.A.M.A. 170:1035 June 27, 1959.*

Two simple criteria for nursery behavior are honored: (1) anything that enters the mouth or nose of a newborn infant must be sterile; (2) the chief source of cross-infection is the contaminated hand and thorough hand washing is essential before a newborn is handled — thus, in 30 years at this nursery, hand-borne cross-infection has been encountered only in two minor instances, and no death from infectious diarrhea, contracted after admission, has occurred.

In the year before nursery reforms were instituted, 27 out of 80 infected infants died — a 33 per cent mortality.

Once diarrhea is discovered, it must be reported to local health authorities, and all other newborns must be moved to rooming-in facilities. The latter technic eliminates the hazards created when bassinets are located row on row. Newborns should be transferred to cubicled bassinet space adjacent to the mother's room as soon as possible. The door to the infant's cubicle must be kept closed, and visitors are excluded from the room while the infant is with its mother.

Nurses are able to turn the hours saved in moving infants to needed patient care. Any inconvenience to mothers is minor compared to the advantages of safety for the infant and more useful time for nurses.

Dale, W. A. and Schwartz, S. I.: "Rebreathing Tube for Prophylaxis and Treatment of Atelectasis," *Am. J. Surg.* 98:20, July, 1959.

A light-weight cardboard cylinder (1,000 cc. volume) fits a plastic mouthpiece. The patient's nose is held closed while he breathes through the tube for three to five minutes. The patient hyperventilates; the alveoli are distended; the patient is stimulated to cough and atelectasis is an unlikely possibility. The tube is discarded after single use; the mouthpiece is terminally autoclaved.

After 18 months of use at Strong Memorial and Rochester Municipal Hospitals, there are no exact figures to support a claim to a lesser incidence of postoperative pulmonary complications, but the general impression among nurses and physicians is that such complications are fewer in number.

The technic has been routine in all postoperative patients, and paper bag rebreathing and carbon dioxide mask inhalations have been completely abandoned.

Decker, H. M., Hoffman, R. K. and Wedum, A. G.: "Air Sampling and Other Control Technics in Study of Hospital Staphylococcal Infection," *Am. J. Pub. Health* 49:947, July, 1959.

In a letter to the editor, the authors point out that many technics familiar to their operation (U. S. Chemical Corps, Fort Detrick, Md.) are applicable in hospital situations, but apparently unfamiliar to those concerned.

On the subject of air sampling, they point out that settling plates do not give any quantitative measurement of the concentration of bacteria in air. A split sampler, which impacts air borne bacteria on an agar plate, will determine the time of appearance and concentration.

Beta propiolactone, in their hands, is an effective agent for disinfecting contaminated areas. It is superior to formaldehyde because less exposure time is necessary. A ward, nursery or operating room can be disinfected in 24 hours; a smaller area may be done in one or two hours.

Forced ventilation after disinfection is imperative in these areas because even a low concentration of lactone in air is very irritating. Beta propiolactone is non-corrosive, but if liquid lactone collects on varnished or painted surfaces, the finish will soften and spoil.

More detailed information on air sampling and decontamination is available from Technical Development Laboratories, Communicable Disease Center, Public Health Service, P. O. Box 769, Savannah, Ga., Att.: Equipment Development Section.

Maggs, Robert L. and Reinus, Francis Z.: "Peritonitis, Caused by Surgical Glove Starch Powder, Treated with Steroids," *Am. J. Surg.* 98:111, 1959.

Another indictment against the indiscriminate use of glove powder in the operating room.

A 29-year old woman is re-explored six weeks after initial gallbladder surgery. Plastic peritonitis, secondary to starch particles, is the pathological diagnosis. The patient recovers after six weeks of pain, misery and near calamity.

The authors warn against the gloved hand which has not been well rinsed before it approaches the surgical field. The mist of air-borne glove powder in the operating room is an everpresent hazard—settling out over the sterile field and in the patient's wound.

A casual glance at the powder cloud in any glove basin used for rinsing gloves gives reason to stop and consider the immensity of the problem when powder is so easily implanted via the glove, the rubber catheter or, indeed, anything else on the field that picks up its share of the dust cloud.

Marcus, E., Kim, H. K. and Autian, J.: "Binding of Drugs by Plastics I. Interaction of Bacteriostatic Agents with Plastic Syringes," *J. Am. Pharm. Assoc.* 48:457, August, 1959.

A review of the known incompatabilities between plastics and certain substances—for instance, the release of acids by certain parenteral solutions in

contact with polyvinyl chloride tubing, the dissolution of polystyrene in paraldehyde, the etching of polystyrene by dimercaprol – stimulated the authors to wonder about the possibility of less obvious incompatabilities.

They conjecture that when there is a *visible* change in medication the nurse or physician is alerted, and the infusion or injection can be stopped. But this caution signal may be absent in other situations realizing for the patient either a medication diminished in concentration or otherwise affected by a chemical change.

They began their study by exposing three types of plastic syringe barrels to five bacteriostatic agents. Polyethylene and polystyrene showed no tendency to bind. Nylon, on the other hand, did bind all five agents to various degrees.

Concentration of solution, temperature, and time are all factors figuring in the change. There is apparently no initial effect in any combination of substances. The first effect in in the case of nylon was noted at five hours.

One wonders if this fear of incompatability can be diluted, considering the momentary contact of the single-use syringe with a medication.

South Dakota O.R. Nurses Present October Program

A one-day program for operating-room nurses was presented in Pierre, S. Dak., October 12 by the operating-room nurses' conference group of the South Dakota Nurses' Association.

Principal speaker was Edna Prickett, R.N., nurse consultant, American Sterilizer Co. Miss Prickett discussed "Methods Improvements in Simple Operating-Room Technics" and "The Worth and Role of the Surgical Technician." She also showed a film depicting the correct use of the sterilizer and correct packaging for autoclaving, and commented on it in detail.

Chairman of the conference group is Sister M. Sponsa, C.S.B., St. Ann Hospital, Watertown, S. Dak.

Catholic O.R.S. Group Holds Annual Meeting

The Sisters of Charity of Leavenworth Operating-Room Supervisors held their annual meeting at St. Joseph's Hospital, Denver, Colo., September 2-4.

Guest speakers and their topics were: Mary V. Schwendeman, R.N., nurse consultant, Surgical Products Division, American Cyanamid Co., "Principles of O.R. Supervision"; Patricia Flynn, personnel director, Providence Hospital, Kansas City, Kans., "Budgeting" and "Simplification and Methods Improvement Program"; G. K. Lermond, Wilmot Castle Co., Rochester, N. Y., "The Inside Story of Steam and Gas Sterilization"; and Mrs. Ruth Morris, executive housekeeper, Providence Hospital, Kansas City, Kans., "Housekeeping in the Operating Room."

Member speakers and their subjects were: Sister Michael, St. James Hospital, Butte, Mont., "The Autoclave Enigma," and Sister Mary Kieran, St. Joseph's Hospital, Denver, "Economy in the Operating Room." A paper on "Economy and Purchasing" was read for its author, Sister Louise de Marillac, who was unable to attend.

Besides the speakers, other members attending were: Sister Mary Roselle, St. John's Hospital, Santa Monica, Calif.; Sister Raphaella, St. Vincent's Hospital, Billings, Mont.; Sister Mary Thomasine, St. Vincent's Hospital, Leadville, Colo.; Sister Mary Lewis, St. John's Hospital, Helena, Mont.; Sister Catherine Lorraine, De Paul Hospital, Cheyenne, Wyo.

Sister Paul, St. Anthony's Hospital, Las Vegas, N. Mex.; Sister Mary Robert and Sister Mary Christopher, director, school of nursing, both from Providence Hospital, Kansas City, Kans.; Sister Alice, St. Francis Hospital, Topeka, Kans.; Sister Rose and Sister Mary Mathew, director of nursing service, both from St. Mary's Hospital, Grand Junction, Colo.; and Sister Mary Sheila, St. Ann's Hospital, Anaconda, Mont.

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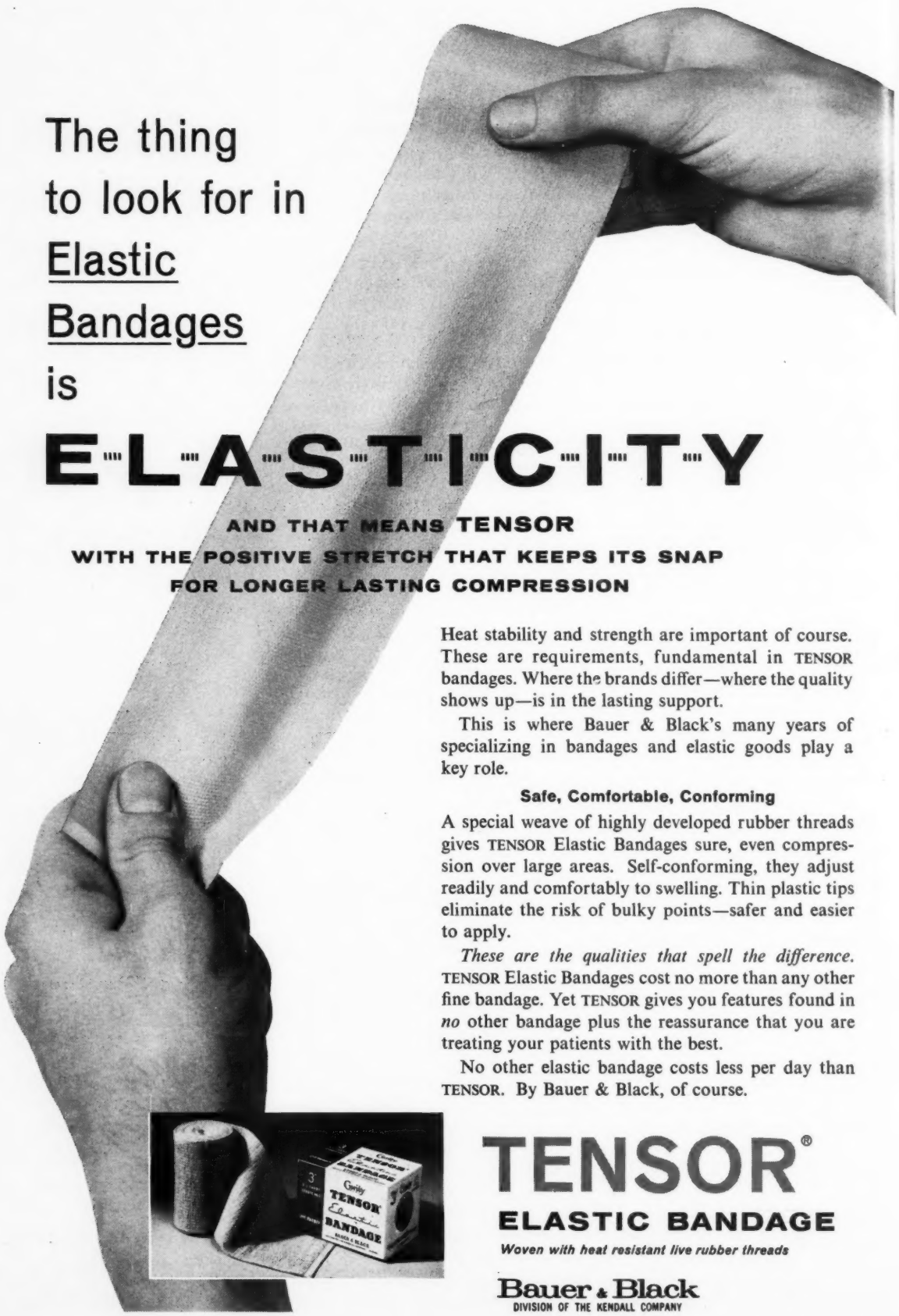

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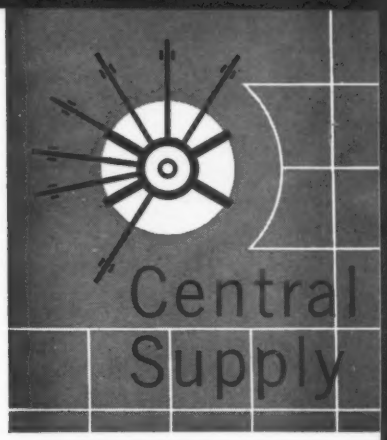

How to Care for Stainless Steel Equipment

From a paper by Richard E. Paret*

*(*More than 500 items of stainless steel equipment are found in hospitals today — many in the central supply department. The importance of proper care of such equipment is apparent.*

The Bureau Research News, *published by the Hospital Bureau, Inc., contained an excellent article on this subject in its October, 1959 issue, condensed from a paper by Richard E. Paret, of the Committee of Stainless Steel Producers, American Iron and Steel Institute. We obtained permission to reprint that condensation here, and have added to it several paragraphs and a table from Mr. Paret's original paper. — THE EDITORS.)*

Although there are over 35 standard stainless steels produced, only about four are used for hospital applications. They are Types 202, 302, 316, and 430. Of these Type 302 is the most prevalent for general hospital service, nursing utensils, and surgical equipment.

In the sterilizing and supply unit, cabinets, counters, sinks, shelves and conveying equipment such as slides and dumbwaiters are regularly made of Type 302 stainless steel or one of its alternates. The sterilizer itself usually has a stainless steel casing and, depending on the manufacturer's preference, often is made entirely of stainless steel.

Type 430 introduced during the Korean War is a nickel-free stainless with slightly less corrosion resistance than Type 302. Type 430 should give equivalent service to Type 302, yet it requires greater care and more frequent and thorough cleaning.

The newest stainless among the four mentioned above is Type 202. It contains less nickel than 302, but has essentially the corrosion-resisting qualities of that type.

For special corrosion resistance applications as found in x-ray photographic laboratories where "hypo" is used, Type 316 is recommended. In addition this grade of stainless is more resistant to the halogen compounds (those containing chlorine, bromine, fluorine, or iodine). When extra corrosion resistance is needed, then, it is preferable to specify Type 316.

Corrosion problems with stainless steel: While the four types of stainless steel just mentioned are generally highly resistant to corrosion from materials and reagents normally encountered in the hospital, there are some chemicals which can cause corrosion if precautions are not taken.

There are several componds which should *not* be used with stainless steel under any circumstances. These are: aqua regia, ferric chloride, cupric chloride, mercuric chloride, and dilute hydrochloride or sulfuric acid.

Tincture of iodine and aqueous solutions containing iodine (and other halogens) are usually quite severe in their actions. If it is necessary to use these solutions in Type 302 stainless steel containers or in close contact with other Type 302 equipment, contact should be limited to less than one hour. Contact with Type 430 should be somewhat less, while that with Type 316 might be slightly longer.

In all cases equipment should be washed thoroughly immediately after use, rinsed with clear water, and allowed to "rest" for a reasonable period before re-exposure.

Sterilizing agents containing chlorine compounds such as potassium hypochlorite must also be used with caution. Normally two hours exposure is safe for Type 302 equipment. Again exposure time should be slightly shorter for Type 430 and longer for Type 316. Washing and rinsing instructions given previously apply.

The following commonly used solutions should not remain in contact with stainless steel for more than four hours at a time: aluminum chloride, calcium chloride, chlorinated lime, Dakin's solution, ferrous chloride, mercuric chloride, sodium hypochlorite, stannous chloride. Again, equipment should be thoroughly flushed and rinsed.

When solutions are mixed, special precautions should be taken as the combination may be much more corrosive than any single ingredient. Then, too, elevated temperatures increase the speed of activity and many compounds normally non-corrosive at room temperatures become so at higher temperatures, or have lower safe exposure time.

General maintenance instructions:

(1.) Clean frequently-fixed equipment on a regular schedule, mobile equipment after each use.

(2.) Select the easiest method that works.

Frequency of cleaning depends on the rate at which equipment gets dirty. While fresh and soft, soil deposits of all kinds are relatively easy to remove. Liberal flushing with steam or hot water and soap or detergent insures thorough cleaning in service and laboratory areas where such treatment is feasible. Thorough clean-

(Continued on next page)

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Q. Does it remove blood, scum, pus, oil, milk and formula solids, injectable drugs such as antibiotics?
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Q. Does it really rinse free of deposits? **A.** YES, HAEMO-SOL softens water . . . keeps magnesium, calcium and cleanser in solution, OFF not ON, instruments and glassware.
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TABLE I

TYPICAL CLEANSERS FOR STAINLESS STEEL

CLEANSING AGENT	METHOD OF APPLICATION	REMARKS
1. Normal service dirt, urine, blood, etc.:		
Soap or detergent and water. Rinse with clear or ammonia water	Sponge, rag, etc.	No effect on finish
Haemo-sol or other special blood solvents	Sponge, rag, etc.	No effect on finish
2. Traffic film on casework, fingerprints on doors, etc.:		
Lumin Cleanser and Lumin Wash Lac-O-Nu	Rub with cloth as directed	Satisfactory for architectural finishes
3. Tightly adhering deposits:		
Finely bolted whiting, Grade FFF Italian Pumice	Rub with damp cloth	No effect on finish
Permapass Liquid Nu Steel	Rub with small amount on dry cloth	No effect on finish, but use light pressure on high luster surfaces
Samae Cameo	Rub with damp cloth	No effect on finish, but use light pressure on high luster surfaces
Paste Nu Steel DuBois-Temp	Rub with small amount on dry cloth	Satisfactory for No. 4 finish, but will scratch No. 8 finish
Cooper's Stainless Steel Cleaner	Rub with damp cloth	Satisfactory for No. 4 finish
Bon Ami	Rub with damp cloth	May slightly scratch No. 4 finish unless rubbing pressure is light
Penny-Brite Copper Brite	Rub with small amount on dry cloth	May slightly scratch No. 4 finish unless rubbing pressure is light
4. Heat tint or heavy discoloration may be removed with:		
Penny-Brite Copper-Brite	Scour with dry cloth	Excellent heat tint removal
DuBois-Temp Paste Nu Steel	Scour with dry cloth or stainless steel wool	Very good heat tint removal
Concor-Abcor-Metal Surface Cleaner	Scour with cloth pad, buffing wheel or brush	Leaves a clean surface with finish according to particular grit size employed
Allen Polish Steel Bright Wyandotte Bab-O	Scour with damp cloth	Very good heat tint removal
5% Oxalic Acid (use warm) 5-15% Nitric Acid or 5-10% Phosphoric Acid Always follow with Neutralizer rinse	Swab or immerse	Good discoloration removal
(Heat tint removal will result in some scratching of the surface.)		
5. Solvents for removing grease, oil, fatty acids, etc. where swabbing or rubbing is undesirable or impractical:		
5-15% Caustic Soda (hot or cold) Up to 6% Solution of: Sodium Metasilicate Trisodium Phosphate Sodium Tetraphosphate Sodium Hexametaphosphate Tetrasodium Pyrophosphate Sodium Tri-polyphosphate		
6. Organic solvents for removing grease, etc.:		
Acetone Ether Alcohol Toluol Xylol Benzol Kerosene Gasoline Benzine Naphtha Oakite No. 33		
7. Chemical cleaner for tough jobs — rust, discoloration, etc.		
Oakite No. 33	Swab and soak 15 to 20 minutes, rinse and dry	May be harmful to paint, wood, fabrics, galvanized steel, rubber, etc. Use synthetic rubber gloves, apron and goggles.

Notes: Ordinary wool or steel brushes should never be used on stainless steel surfaces. Particles of steel may become imbedded in the stainless steel surface, and rusting of these particles will eventually appear as stains. Use stainless steel wool or sponge, or fibrous brush or pads instead.

For heavy hard water deposits, 15-20% (by volume) nitric acid is very efficient. Acid treatment should be followed by a thorough water rinse.

The action of soldering fluxes should be neutralized immediately with a 5% sodium carbonate solution.

ing is important, particularly where Type 430 is used.

Special cleaning solutions formulated for the removal of blood are valuable time-savers and effective cleaners in laboratory and surgical departments. Often, too, standard household detergents such as Fab or Tide have wide application for this type of removal.

Deposits of milk residue may be found in nursery or formula kitchen equipments. Klenzade and Oakite are typically recommended "milkstone" removers.

In general, cleaning stainless steel kitchen utensils will demand very little effort. Removal of baked-on residues may require a gentle to vigorous polishing action with a suitable cleaner. Rubbing should be as gentle as possible and always done in the direction of the polishing marks on the steel. For conventional deposits, use a soft cloth; for more resistant deposits, use a stainless steel scouring sponge.

Common steel wool, scrapers, wire brushes and the like should never be used as they may roughen or gouge the finish, and may leave small particles of steel embedded in the surface which tend to rust, causing spotting, or even act as foci for pitting.

A nitric acid rinse may be dictated where stubborn deposits of organic, mineral, or carbonaceous materials have accumulated. Precautions should be taken to make sure that this solution does not come in contact with parts of the stainless equipment being cleaned that are fabricated of other materials. After the use of a strong solution such as a nitric acid rinse, the equipment should be flushed with clean hot water.

Cabinets, casework, doors and other architectural items of stainless steel usually require normal dusting and an occasional soap and water washing, followed preferably by an ammonia water rinse.

Fingerprinting will be the main cause for additional maintenance for esthetic reasons. It can be held to a minimum if cleaning is done with a recommended metal cleaner or wash. A good cleaner will not only remove grease of fingerprints and traffic film, but will leave a thin coating of wax of silicone which will mask subsequent fingermarks quite effectively.

Heat tint removal: Some pieces develop slightly darkened areas on their surface. This is called "heat-tint," a surface phenomenon caused by thickening of the oxide surface of the stainless steel. Though the appearance of the pieces may be marred, corrosion resistance is not impaired. Recommended removal procedure calls for vigorous scouring using a stainless steel scouring sponge and a suitable tint remover.

The following preventive maintenance technics will minimize heat tinting:

(1.) Use only enough heat to do the job.

(2.) Do not apply heat to empty equipment.

(3.) Avoid concentrating heat over a small area.

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(*Continued from page* 9)

Reduction of Discomfort Eases Mental Strain

A patient's mental outlook can be improved by treating his physical pain, according to James G. Miller, director of the University of Michigan Mental Health Research Institute. Dr. Miller further states that mental anguish in patients who must bear prolonged physical pain is as great a problem as the psychosomatic ills.

Dr. Miller termed the treatment of mental implications of physical disease "somatopsychic medicine," the opposite of psychosomatic.

Dandruff Danger Eyed By Ophthalmologist

Persons who have chronically sore eyelids should investigate the possibility that the condition has some connection with dandruff, suggests James S. Jordan, M.D., Scranton, Pa. He further states that a common type of eye trouble may be cleared up by dandruff treatment.

Dr. Jordan reports that studies of bacteria of the scalp and eyes show that the same cells work in both places in the same way, producing dandruff in the one place and a condition called blepharitis in the other. The eye disorder is identifiable by the white scales it produces at the base of the lashes. Twice-weekly shampooing is recommended as a corrective measure.

Arctic Could Become Vacation Spot

Summer vacations on the Greenland ice cap may someday be common, states Capt. Alan D. Matzger, U. S. Army Medical Research Laboratory, Ft. Knox, Kentucky. Many persons are already living and working in the Arctic, and their lives are no more dangerous than those in more temperate areas, he adds.

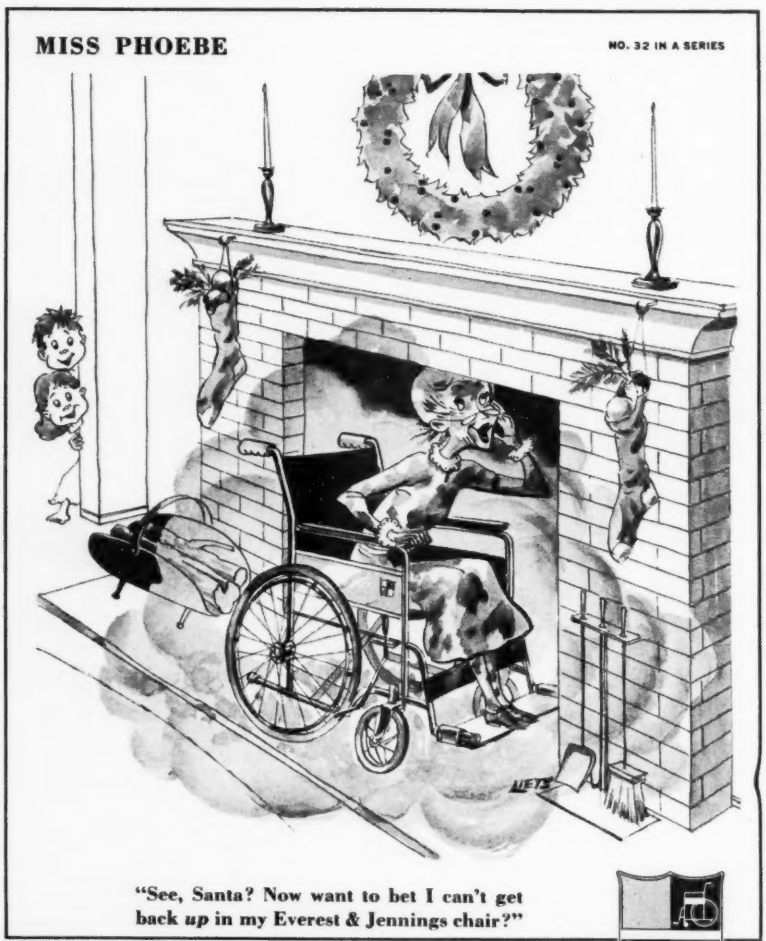
Many problems will have to be solved, however, before full-scale development of the frozen regions can be accomplished. Some of the questions involved concern dietary caloric requirements, effects of extreme cold on disease and disease-bearing organisms, and effects caused when man does not have the normal day-night cycle of the more temperate regions.

Eyes May Tell Story To Prevent Stroke

Blood pulsations in the eyeball have been used in the diagnosis of one cause of paralytic stroke, according to J. Lawton Smith, David G. Cogan, and Irving H. Zieper, Boston M.D.'s.

A common cause of stroke is the blocking of the internal carotid artery. The Boston physicians state that if an obstruction such as a blood clot is found in the artery early enough, it can be removed surgically or with drugs even before the stroke occurs.

Diagnosis of internal carotid insufficiency can be made by checking the blood pressure of the eyes in a technic called ophthalmodynamometry. The eyes are first anesthetized and dilated. Pressure is applied to the eyeball, and pulsations are observed through an ophthalmoscope.



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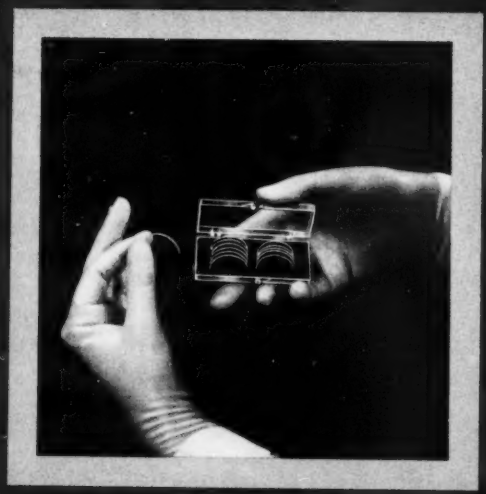

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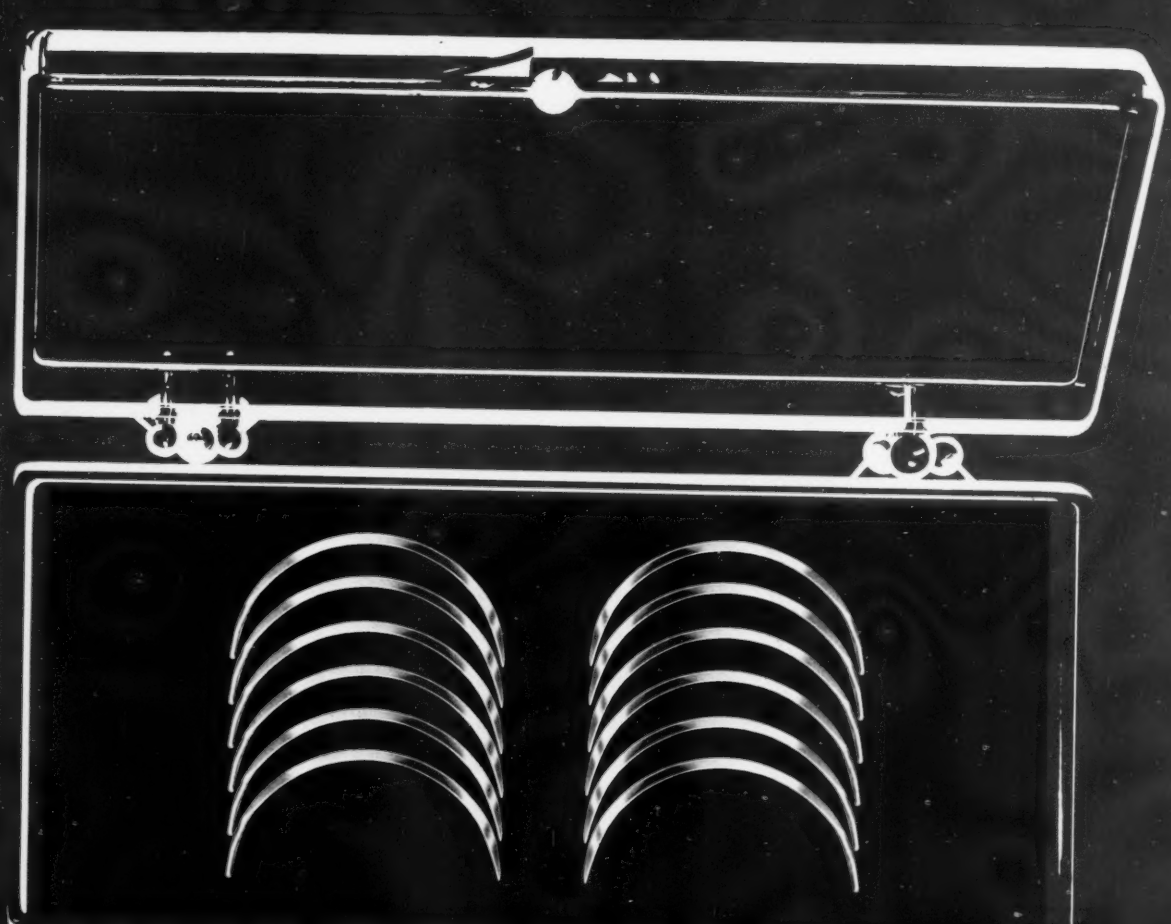

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Laboratory Test Developed To Diagnose Rare Disease

Laboratory tests for positive diagnosis of metachromatic leukoencephalopathy (ML), a rare central nervous system disease, have been developed at University of Oregon Medical School, Portland, by James H. Austin, M.D., assistant professor of neurology.

In controlled studies of 150 patients suffering neurological and other disorders, Dr. Austin found that only ML contained clumps of granular material, which he identified as sulfatides – fat-like substances occurring normally in small quantities in myelin and in kidneys and other organs.

The kidney material, which is passed out of the body through the patient's urine, can be detected by two urinalyses using straining technics. If results are positive, three other procedures can be employed: a blood test, a muscle-response test, and a kidney biopsy. Thus far, Dr. Austin states, there have been no falsely positive results from properly performed urine tests.

Until now, the only positive method of ML diagnosis during a patient's lifetime has been biopsy.

Nuclear Tests Could Prove Hazardous to Population

If frequent nuclear tests are resumed and continued indefinitely, hazard to the world's population could result. So warns a report by the Joint Congressional Atomic Energy Committee.

Although man's exposure to radiation from testing is and will be relatively small compared to "normal background radiation" always present, any dose, however small, produces some biological effect that may be harmful, the report states.

Nuclear tests discharge radioactive strontium-90, which can cause both leukemia and cancer. If tests over the next two generations follow the same pattern as in the past five years, the predicted average concentration in bone will be about 18 strontium units. This is close to the maximum permissible body burden of 67 strontium units set by the International Commission on Radiological Protection.

Student AMA Establishes Scientific Division

A Division of Scientific Activity has been established by the Student American Medical Association, an independent association of resident physicians, interns, and medical students.

While most future projects will depend on grants, this group is now assisting the Senate's non-partisan international health work by making a survey of foreign nationals who are studying medicine or working in hospitals in the U. S. Purpose is to help them overcome any difficulties and make medicine the international diplomatic force it should be, according to Edward R. Pinckney, M.D., editor of the association's official publication.

Other fields the group will explore are existing audio-visual aids and exhibits in the medical field, and social environment of the medical student.

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Right: New president of the Vermont Hospital Association is Ralph H. Ross (lower center), administrator, Brightlook Hospital, St. Johnsbury. Other officers are (clockwise) Thomas Hennessey, administrator, Springfield Hospital, Springfield, secretary; Frederick A. Hale, comptroller, Mary Fletcher Hospital, Burlington, treasurer; and Joel Walker, administrator, Barre City Hospital, president-elect.

Below: Frederick A. Hale (left), comptroller, Mary Fletcher Hospital, Burlington, Vt., is the newly elected president of the Vermont chapter, American Association of Hospital Accountants. He is being congratulated by Sister Mary Eulalia, Sacred Heart Hospital, Manchester, N.H., out-going president, while president-elect Armand Bouchard, Vermont-New Hampshire Hospitalization Service, Concord, N.H. looks on.

Personally Speaking

Margaret Arnold—has retired after 27 years as administrator, Lake View Hospital, Danville, Ill. Miss Arnold is a past vice-president of the Illinois Hospital Association and a former member of the House of Delegates of the American Hospital Association.

Olive I. Ashford—has been named chief dietitian, St. Clare's Hospital, Schenectady, N. Y. She was formerly at St. Mary's Hospital, Hoboken, New Jersey.

Leon Bennet-Alder—has been appointed administrator, Chicago (Ill.) Osteopathic Hospital. He was formerly administrator, North Country Hospitals group, supervising Edward John Noble Hospitals in Alexandria Bay, Canton, and Gouverneur, N. Y.

Oliver L. Bergevin—is new administrator, Pacific Communities Hospital, Newport, Ore. He was previously administrator, McMinnville (Ore.) General Clinic and Hospital.

Joseph G. Bertolami—has been appointed administrator, Kendall Hospital, South Miami, Fla. He is a graduate of Columbia University and a nominee in the ACHA.

Norman A. Brady—has been appointed director, Presbyterian-St. Luke's Hospital, Chicago. Since 1956, Mr. Brady has been assistant director of the merged hospital and administrator of the Presbyterian division.

Ned B. Clarke—has been named administrator, Richland Memorial Hospital, Olney, Ill. He previously was assistant administrator, Blanchard Valley Hospital, Findlay, O.

Frances Daggett, R. N.,—has been appointed administrator, Benjamin Stickney Cable Memorial Hospital, Ipswich, Mass. She was formerly assistant administrator, Boston (Mass.) Lying In Hospital.

Hessel Flitter—has been appointed director of the newly formed research and studies unit, National League for Nursing, New York City. The group will provide consultation to the NLN staff and gather statistics and centralize information relating to league programs to improve nursing and nursing education. **Robert M. Gleason** has been named director for business administration of the organization's newly centralized finance, personnel, automation, testing and convention services.

Frederick Grubel—has been named deputy executive director, Maimonides Hospital of Brooklyn, N. Y. He was formerly associate director, Montefiore Hospital, New York City.

William C. Lightburn—is new administrator, McDonough District Hospital, Macomb, Ill. He was formerly assistant administrator, Lincoln (Neb.) General Hospital.

Allen Podell—is new administrator, Brooklyn (N. Y.) Hebrew Home and Hospital for the Aged. He was

(Continued on next page)

CLASSIFIED

SHAY MEDICAL AGENCY

Blanche L. Shay, Director
Pittsfield Bldg., 55 E. Washington St.
Chicago 2, Illinois

POSITIONS OPEN

ADMINISTRATORS: (a) Middle West. 50-bed hospital in southern Illinois. (HT-3496). (b) Middle West. 680-bed hospital. Require broad knowledge of all phases of hospital administration. (HT-3329). (c) Southwest. 70-bed hospital. Present administrator retiring after 10 years. They are going immediately into building a very beautiful 108-bed hospital. To $12,000. (HT-3514). (d) Assistant. Southwest. 122-bed hospital. (HT-3524). (e) East. 160-bed hospital. Require good hospital experience. Near N.Y. City. (HT-3425). (f) East. 60-bed hospital built in 1951—modern in all respects. $8,000 minimum. (HT-3313). (g) Assistant. Must be R.N. 100-bed hospital near Philadelphia. Some training or exp. in administration. (HT-3510).

PHYSICAL THERAPISTS: (a) Calif. 450-bed hospital noted for research. Have just opened new rehabilitation center. Good opportunity. $450 up. (HT-3222). (b) Chief. East. Large state hospital. Dept. is expanding and there is a real opportunity for advancement. $450 up to start. (HT-3249). (c) Director of Adjunctive Therapies. Supervise and coordinate activities of the hospital. To $7,300. HT-3186). (d) Chief. Middle West. 200-bed hospital. Opening a new multiple rehabilitation center early next year. Good future. $6,000 up to start. (HT-3460). (e) Chief. East. 125-bed hospital. Building program under way that will triple size of physical therapy dept. Challenging position with a real future. (HT-3403).

PHARMACISTS: (a) Calif. Staff. 400-bed hospital. Have just completed new building program. $7,200. (HT-3499). (b) East. Staff. 350-bed hospital. Will accept recent graduate. To $6,000. (HT-3379). (c) Chief. Middle West. New 110-bed hospital near Chicago. $6,600 (HT-3369). (d) Assistant. Northwest. 170-bed hospital — have one of finest pharmacies in the country. $5,400 to start. (HT-3108).

SOCIAL SERVICE: (a) Chief. Psychiatric. East. Large state hospital. Supervise Mental Hygiene Clinic. To $7,500. (HT-3503). (b) Director of Social Services. South. 500-bed teaching hospital. Supervise work routine of 5 case workers. Good salary. (HT-3386). (c) Case Worker — Medical setting. Some supervisory experience. Large State University Medical Center. To $8,000. (HT-3517). (d) East. Director of Social Service. Supervise in-patient and out-patient departments. Have just completed new wing that will make it a 500-bed hospital. Top salary. (HT-3104).

NOTE: We can secure for you the position you want in the hospital field, in the locality you prefer. Write for an application today—a postcard will do. ALL NEGOTIATIONS STRICTLY CONFIDENTIAL.

Director of Nursing Service—Present director retiring. Well organized department of nursing, enjoys excellent rapport with other departments. J.C.H.A. approved hospital, 289 adult beds, modern plant and equipment. Located in picturesque Kanawha Valley. No school of nursing at present. Prefer candidate with Master's degree and some experience either as director or assistant. Progressive attitude on salary, three weeks paid vacation, sick leave accumulative to 30 full and 60 half days. Truly a desirable position. Write Dept. HT 12, Hospital Topics, 30 W. Washington, Chicago 2, Ill.

PERSONALS continued

formerly assistant administrator, hospital division.

Maria Rementeria—has joined the staff, Division of Nursing Resources, U. S. Public Health Service, to assist with the Professional Nurse Traineeship Program. She was formerly with the USPHS hospital, San Francisco, Calif.

Eileen Coughlin, formerly a trainee under the program, has also joined the staff. Before undertaking the advanced study, Miss Coughlin was nursing arts instructor, St. Joseph's Hospital School of Nursing, Alton, Ill.

Edward Rensch, Jr.—has been appointed administrator, Wabash General Hospital District, Mt. Carmel, Ill., succeeding **Lucille Baston.** Mr. Rensch previously was administrator, Crete (Neb.) Municipal Hospital.

C. Dwayne Shoemaker—has been selected administrator, Carmi Township Hospital, Carmi, Ill.

William J. Silverman—has been appointed executive director, Michael Reese Hospital and Medical Center, Chicago, Ill., where he has been associate director since 1952.

He succeeds **Morris H. Kreeger, M. D.,** who is resigning January 1 to devote his time to consultation work in the field of hospital administration.

John Y. James has been appointed associate director, replacing Mr. Silverman.

OPERATING ROOM SUPERVISOR — 500-bed voluntary hospital. Degree and/or satisfactory experience. Active program-clinical instructor employed for teaching students. Salary commensurate with qualifications. Liberal personnel policies. Direct transportation to New York City in 35 minutes. Write to: Director of Nursing, Newark Beth Israel Hospital, Newark 12, New Jersey.

NURSE, R.N.—Maternity supervisor. Complete charge of dept. including nursery, labor, delivery suite. Must be experienced. Special training desirable. Salary open. Apply Miss M. O. Hall, Director of Nurses, Princeton Hospital, Princeton, N. J.

Sister Maria—is new administrator, Blessed Martin de Porres Hospital, Mobile, Ala., succeeding **Sister M. Veronica,** who has been transferred to Atlanta, Ga.

Sister M. Almarita—has been appointed superior and administrator, Holy Cross Hospital, Chicago, Ill. She was formerly assistant administrator at the hospital.

John Tabue—is new administrator, Berlin (Wis.) Memorial Hospital, succeeding Manda Roe, who resigned.

VA Nursing Appointments

Martha J. Bruske—is assistant chief, nursing education, Roseburg (Ore.) VA hosiptal. She was formerly an instructor at Sepulveda, Calif.

Rhea Carr—has been appointed chief, nursing service, Kecoughtan (Va.) VA hospital. She was previously assistant chief, nursing service, Ft. Howard (Md.) VA hospital.

Lillian F. Carter—is chief, nursing service, Buffalo (N. Y.) VA hospital. She formerly held a similar position at the East Orange (N.J.) VA hospital.

Alma K. Catherwood — is chief, nursing service, Marlin (Tex.) VA hospital. Before transfer she was chief, nursing service, Fresno (Calif.) VA hospital.

Jennie L. DeLuga—is assistant chief, nursing education, Lincoln

(Neb.) VA hospital. She was formerly supervisor, University of Michigan Hospital, Ann Arbor.

VA Appointments

Five new members have accepted appointments to the VA Special Medical Advisory Group. They are Jasper L. Callaway, M.D., professor of dermatology, Duke University; Arthur G. DeVoe, M.D., chairman, department of ophthalmology, New York University Post-Graduate Medical School; Raymond J. Nagle, D.D.S., dean, college of dentistry, New York University; Ralph M. Tovell, M.D., director, department of anesthesiology, Hartford (Conn.) Hospital; O. Currier McEwen, M.D., associate professor in medicine, New York University.

The group is composed of specialists in medicine and allied professions, and advises the Administrator of Veterans Affairs and the VA chief medical director on the VA medical program.

New Officers

Ward E. Perrin, D.O.—has been installed as president, American College of Osteopathic Internists. Dr. Perrin is medical director, Chicago (Ill.) Osteopathic Hospital.

* * *

John H. Zenger—has been appointed president-elect, Association of Western Hospitals. Mr. Zenger, administrator, Utah Valley Hospital, Provo, Utah, was appointed to fill the vacancy created by resignation of **Clyde W. Fox.** Mr. Zenger was formerly vice-president. **Joseph L. Zem,** former treasurer, replaces Mr. Zenger as vice-president.

* * *

Delegates at the recent Arizona Hospital Association annual convention elected the following officers: **Sister Elizabeth Joseph,** administrator, St. Mary's Hospital, Tucson, president; **M. G. Wolfers,** administrator, Tucson Medical Center, vice-president; **Guy M. Hanner,** administrator, Good Samaritan Hospital, Phoenix, executive secretary-treasurer. **J. L. Cline,** administrator, Gila General Hospital, Globe, and **Mrs. Florence Ladner,** administrator, Hoemako Cooperative Hospital, Casa Grande, were elected to serve three-year terms as trustees.

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Buccal / Aqueous / in Oil

superior anti-inflammatory enzyme

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thrombophlebitis / phlebitis / cellulitis / asthma / bronchitis / rhinitis / sinusitis / bruises / hematomas / sprains / fractures / episiotomies / pelvic inflammatory disease / mastitis / postpartum breast engorgement / biopsies / surgical and obstetrical trauma / inflammatory skin and eye conditions / dermatoses / burns / ulcerations / peptic ulcers / ulcerative colitis / epididymitis / orchitis / prostatitis / hemorrhoidectomies / tonsillectomies / hernia repair / plastic surgery /

CHYMAR *Buccal* Crystallized chymotrypsin in a tablet formulated for buccal absorption. Bottles of 24 tablets. Enzymatic activity, 10,000 Armour Units per tablet.

CHYMAR *Aqueous* Solution of crystallized chymotrypsin in sodium chloride injection for intramuscular use. Vials of 5 cc. Enzymatic activity, 5000 Armour Units per cc.

CHYMAR Suspension of crystallized chymotrypsin in oil for intramuscular injection. Vials of 5 cc. Enzymatic activity, 5000 Armour Units per cc.

Armour Means Protection

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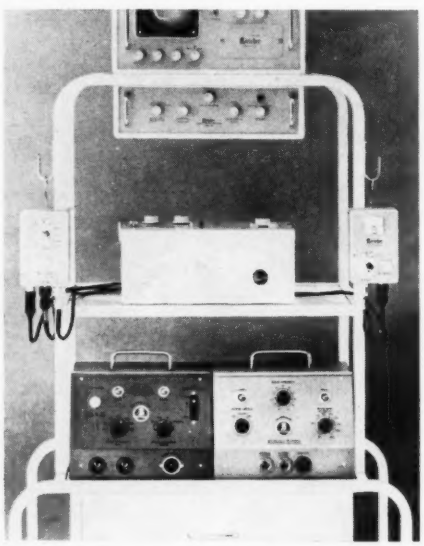
BUYER'S GUIDE

For further information on any of the products, please check the Buyer's Guide number on the reply card opposite page 128.

201. Catch basin

Newly designed kick-about catch basin incorporates a rectangular shape that gives a greater area for the reception of drainage, eliminates time and trouble in post-operative clean-up. Stainless steel frame allows ample toe space; is high enough so that basin can be placed over the base of the operating or OB table. Unit is mounted on 2" conductive casters. Shampaine Industries, 1920 S. Jefferson St., St. Louis 4, Mo.

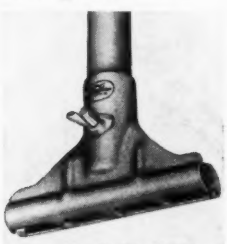


202. Monitor-resuscitator

Birtcher 390 Mobile Cardiac Monitoring and Resuscitation Center is comprised of a cardioscope, an EEG preamplifier, an electronic switch for dual trace, and a heartpacer, all mounted on a five-foot pyramid cabinet. Complete with all necessary cables and standard accessories; ample space provided in two large drawers in cabinet for storage of items needed by the resuscitation team. Available as a complete package, or as individual units. The Birtcher Corp., 4371 Valley Blvd., Los Angeles 32, Calif.

203. Ripair

Adhesive-backed Mylar tape, especially developed for patching oxygen tents, invisibly and permanently, is available in 25′ rolls. Can also be used on plastic sheeting, instrument covers, books, and papers. Oxygen Equipment & Service Co., 8335 S. Halsted St., Chicago 20, Ill.

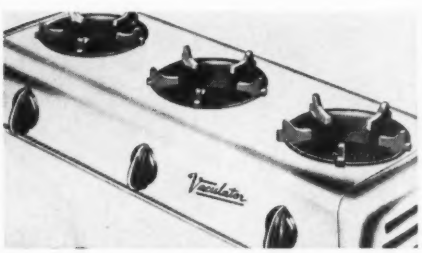


204. Mop handle

Durable, lightweight aluminum, ideal for women workers. Ends are capped to avoid damage to walls, woodwork. Available with clamp-type jaws or springless solid-grip jaws in 54" and 60" lengths. Fuller Brush Co., 88 Long Hill St., East Hartford 8, Conn.

205. Can Crusher

Portable electric unit has short stroke jaw action which crushes cans of any size flat at very high rate of speed. The ¾-h.p. single phase motor operates on A.C.; requires no skill to operate. Rescor Industries, division of C. Q. Sherman Associates, Inc., Bar Bldg., Mount Vernon, N. Y.



206. Vaculator

Gas coffee maker stoves are now being made with a simplified manifold construction that results in longer life, with easier connections to the gas line from the back of the range. Change applies to the complete line of Vaculators from two- to six-burner models. Hill-Shaw Co., 311 N. Desplaines, Chicago 6, Ill.

207. Hydraulic chair

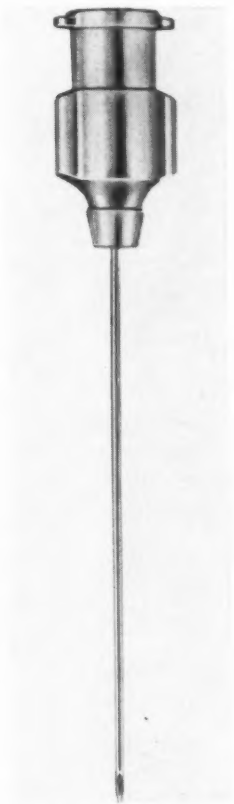
Designed for use in eye, ear, nose and throat, and outpatient departments, new chair features a factory-sealed foot-operated hydraulic lift whose single pedal raises and lowers the chair and locks its revolving action. With or without patient foot rest. Seat and reclining back in a choice of genuine leather colors. F. & F. Koenigkramer Co., 96 Caldwell Drive, Cincinnati 16, O.

208. Cold transporter

New 5-cu. ft. plastic foam portable Freez-Safe keeps items solidly frozen for 36 to 48 hours without dry ice or refrigerant. Will carry up to 175 lbs. of frozen products well within safety requirements. Inside measurements, 23″x 14″x23″. Expanded polystyrene walls, top and bottom are 2½″ thick, one-fifth the weight of 4″ cork insulation. Glo-Brite Foam Plastic Products, 6415 N. California Ave., Chicago 45, Ill.

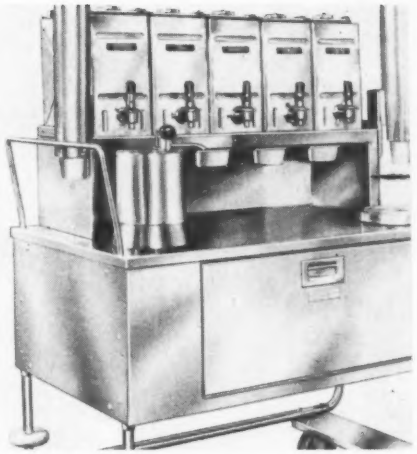
209. Catheter

Ready for use without autoclaving, Steril-Pak latex balloon catheters are available with or without self-sealing plug, in 5cc or 30cc, even sizes 12-30FR. Style, balloon, and Fr. sizes are printed on carrier board. Metro Medical Distributors, Inc., 17 W. 17th St., New York 11, N. Y.



210. Needle

Disposable Luer-Lock needles have brass-nickel-plated hubs, stainless steel canulas; Hypolance points to assure less tissue trauma, greater patient comfort. Packaged in clear-front envelopes; guaranteed sterile, pyrogen-free, and ready for use. Hypo Surgical Supply Co., 11 Mercer St., New York 13, N. Y.



211. Beverage cart

Unit consists of a row of five Stanley 2-gal. beverage jugs, each labeled according to contents, set on a rolling cart with cup dispensers. The stainless steel jugs keep liquids hot or cold. Reduces number of trips to the kitchen; centralizes distribution, relieving nurses of dietary chores. Mobile Kitchens, Inc., Cleveland, O.

212. Solenoid valve

New all-plastic, corrosion-resistant valve for medical equipment applications prevents the fluid from contacting any metal. The media is confined to a given area which can be easily cleaned, thus meeting the most stringent sanitary requirements. Will not impart taste, change the metallic content of a liquid, or add sulphur to the solution. Valcor Engineering Corp., 365 Carnegie Ave., Kenilworth, N. J.

ATARAX

PASSPORT TO TRANQUILITY

Passport
A UNIVERSAL RECORD OF EFFECTIVENESS—In anxiety, tension and agitation, ATARAX "... produced a more favorable state of calm and tranquility than any drug previously used."[1]
WIDEST LATITUDE OF SAFETY AND FLEXIBILITY—No serious adverse reaction ever documented—five dosage forms and sizes.
CHEMICALLY DISTINCT AMONG TRANQUILIZERS—Not a phenothiazine or a meprobamate.
ADDED FRONTIERS OF USEFULNESS—These unique benefits in specific indications
ANTIARRHYTHMIC • ANTIHISTAMINIC • ANTISECRETORY
BACKED BY A WORLD OF EXPERIENCE
Dosage: Adults. For tension and anxiety, one 25 mg. tablet, or one tbsp. Syrup q.i.d. For severe emotional disturbances and sedation, one 100 mg. tablet t.i.d. For psychiatric and emotional emergencies, 25-50 (1-2 cc.) I.M., 3-4 times daily q. 4. h.
Children: For behavior disorders. 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d. Parenteral dosage for children under 12 not established.
Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.
References: 1. Farah, L.: Internat. Rec. Med. 169: 379 (June) 1956. 2. Over 200 laboratory and clinical papers from 14 countries.
ATARAX IN CARDIOLOGY
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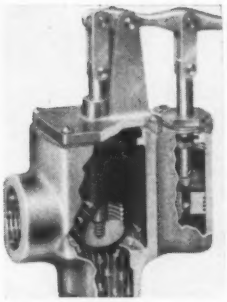
Science for the World's Well-Being

213. Plaster of Paris bandage

Pure white, fine-grained plaster, baked by exclusive European process, has a creamy consistency evenly distributed. Molds easily, even in difficult constructions, assuring full immobilization, firm support. Normal setting time is two to four minutes, but the process may be shortened or lengthened, depending on the type of fracture being treated. Greater strength and durability permit use of thinner, lighter casts, which in turn allows for reduced x-ray exposure time. Complete size range. One dozen rolls individually sealed and hermetically packaged in air-tight metal containers. Wound on rigid core. Acme Cotton Products Co., Inc., 245 Fifth Ave., New York 16, N. Y.

214. Arm sling suspension

Unit, which fits any tubular wheelchair with quickly installed bracket, helps prevent deformity and encourages activity. Excellent support for patient's arm to facilitate self-feeding, exercise, and ADL. Overhead support rod easily moved when sling is not in use; assembly is adjustable to any position along the overhead stainless steel rod. Leatherette sling adjusts to either child or adult patients. Rehabilitation Products, division of American Hospital Supply Corp., 2020 Ridge Ave., Evanston, Ill.

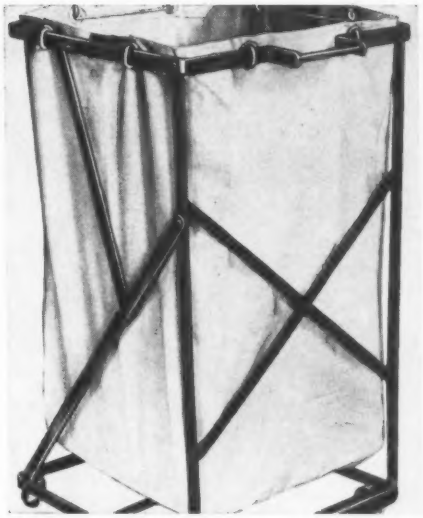


215. Valve

Newly improved model flush valve is guaranteed for five years against all mechanical defects. Overcomes mechanical deterioration and inadequate water pressure. Hydraulic controlled action saves on water, eliminates water hammer. Control mechanism is immersed in oil, minimizing costly maintenance and parts replacement. Marchant Valves, 14444 Washington Ave., San Leandro, Calif.

216. I.V. board

Formed plastic Intra-V-Board eliminates expensive, time-consuming padding. Pliable, it adjusts to the size of the arm, is equally efficient in the palm-down position, yet rigid enough to assure immobilization. Impervious to staining by ordinary hospital materials; easily cleaned and sterilized. Resists breakage; nest for easy, compact storage. May be used with or without minimum padding. Conco Surgical Products, 38 Poland St., Bridgeport, Conn.



217. Pick-up truck

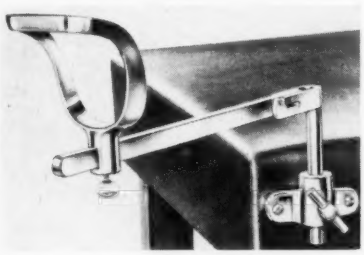
Two models, one with two fixed wheels on rear, the other with two wheels on rear and swivel casters on the front. Push or pull handle aids in maneuverability. Designed to facilitate collection of waste paper, trash, soiled linen. Standard equipment includes detachable 10-oz. white duck bag with large brass grommets and triple-sewn French seams. Steel frame folds for easy storage. Flame-resistant bag available. White Mop Wringer Co., Fultonville, N. Y.

218. Music system

MoodMaster consists of one-reel tape magazine with special background music, automatic tape player, speakers, auxiliary amplifiers and speakers. Plays up to two hours without repeating, and magazine will continue to play until removed or the machine is turned off. Programmed to avoid abrupt changes in type of music. Conley Electronics Corp., 8225 Christiana St., Skokie, Ill.

219. K stirrup

New stirrup adjusts laterally as well as along the length of the supporting bar; unique mechanism locks in place when in use, a slight lifting action releases it, and it drops to the side of the table, where it will not obstruct the doctor. Professional Specialties, Inc., 1330 Dolman, St. Louis, Mo.



220. Generating plant

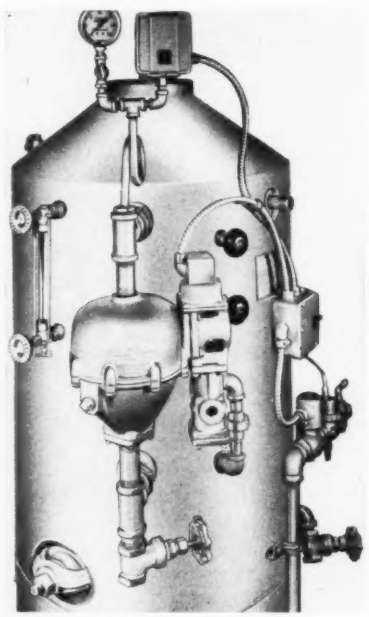
New, low-cost series 50KB units are complete electric generating plants, with the International Harvester UV-401, V-8 engine, Onan Magneciter generator, and control panel assembled into one compact unit. The gasoline engine-driven generator set, for standby emergency applications, is available in all standard voltages to 600 volts. D. W. Onan & Sons, Inc., 2515 University Ave., S.E., Minneapolis 14, Minn.

221. Wheelchair

New, low-priced chair is constructed of tubular steel frame, and is free of flat steel folding members, riveted hinges, joints and flattened tubes to improve folding characteristics. Plywood seat is protected by clothing guards, and chair is equipped with 24" tangent spoke wheels, brakes, adjustable foot rests, foam-padded arm rests and seat. The Colson Corp., 7 S. Dearborn St., Chicago, Ill.

222. Utility truck

New budget-priced version of company's all-purpose utility truck has non-twist frame and rigidly braced, automotive-type chassis. Completely rubber-bumpered and soundproofed; rubber-tired casters have dirt and string guards. Hammerloid finish resists chipping and scratching. Bloomfield Industries, 4546 W. 47th St., Chicago 32, Ill.

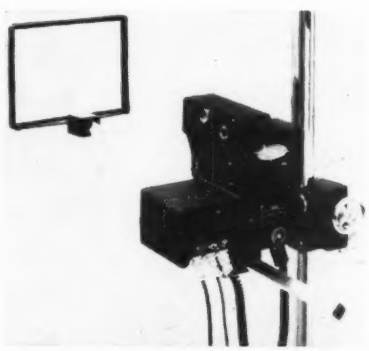


223. Steam boiler

Provides steam pressure up to a maximum of 15 lbs. for bakery appliances, sterilizers, vegetable steamers, steam jacketed kettles, pan and dish washer units. Fabricated of code steel; fully automatic safety and operational controls; gas operated. In two-, four-, and six-h.p. capacities. Two-h.p. unit occupies an area 18"x24"; four-h.p., 24"x30"; six-h.p., 30"x32". Anetsberger Brothers, Inc., 180 N. Anets Drive, Northbrook, Ill.

224. Scintillation scanner

Provides highly defined scans while subjecting the patient to smaller doses of radiation, a contrast circuit making it possible to emphasize small relative differences in radioisotope concentration and to minimize effect of background radiation. Recording, made by electrical impulses, is silent. Unit may be set up on a mobile floor mast or mounted on a wall bracket; motor-driven for vertical or horizontal travel in either mounting. Picker X-Ray Corp., 25 S. Broadway, White Plains, N. Y.



225. Cineray camera

Portable Cineray motion picture camera equipment will produce bright, sharp 16mm x-ray cinefluorographic pictures in either standard or slow motion for extended study and diagnosis of internal physiologic action and function with minimal radiation sequelae under usual precautions. Valuable for the study of cardiovascular, peripheral vascular and circulatory problems; and for gastro-intestinal and respiratory observation. Can be used with remote controls. American Teletronics, Inc., 1754 S. Clementine St., Anaheim, Calif.

226. Geiger tubes

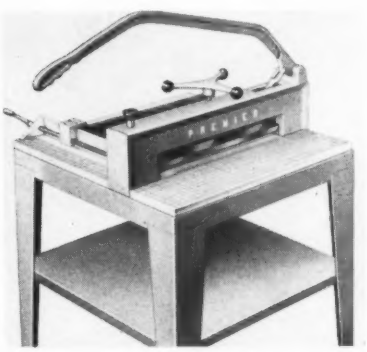
Two Amperex Geiger tubes, which make it possible to undertake research with radioactive tracers using reduced amounts of radioactive materials, are more accurate and reliable than existing units, according to manufacturer. A system using the tubes weighs 400 lbs. as compared to 4,000 lbs. for a conventional unit, which may require as many as 30 tubes. Anken Chemical & Film Corp., Newton, N. J.

227. Disposable shoe cover

Low-cost, paper shoe cover specially designed for one-time use in surgery or highly infectious areas helps prevent carrying contagion throughout hospital. When used in uncontaminated places, may be autoclaved for re-use. Conductive rubber soles; tab under foot grounds static electricity. American Hospital Supply Corp., 2020 Ridge Ave., Evanston, Ill.

228. Clearsite container

New 2½" diameter Clearsite containers for packing 250cc serum vials eliminate duplicate folding box printing costs, storage, handling and application costs. Of crystal-clear, thin-wall, flexible extruded plastic that will not crack or tear; has no seams; reinforced bottom. Available in any desired length, with suitable closures. Celluplastic Corp., 24 Commerce St., Newark 5, N. J.

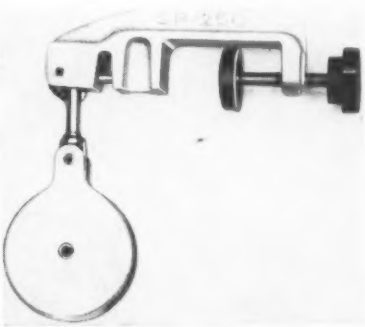


229. Paper cutter

Manual high ratio paper cutter designed for safety and economy, cuts a stack of paper 2" thick by 18" long. Handle design allows small person with weak grip to make a quick, efficient cut. Cutting scales are calibrated in 1/32" increments; cutting platform has deep machined lines every half-inch. Over-all size, 26"x26". Precision ground steel blade is locked into position, is removable for sharpening. Martin Yale, Inc., 2100 W. Fulton St., Chicago 12, Ill.

230. Lab lotion

New formulation keeps hands smooth, prevents chapping and cracking after frequent washings, even for chemists who work with acetone, methanol, ether, glassware detergent; and clinicians who use alcohol, xylene, chloroform, benzene and strong caustics. Pleasantly scented, non-greasy, lotion has the highest lanolin content ever incorporated in this preparation. In 16-oz. bottle with pump dispenser. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.



231. Pulley assembly

New pulley bracket assembly, Model No. Sp-250, is adaptable to any physical therapy department, hospital ward, or doctor's office, and is also suitable for home treatment programs. Easily fits and attaches to doors and frames; excellent for upper extremity exercises. Ruggedly constructed, it adjusts from 1" to 2½". Non-marking rubber pressure post assures stability; 2½" ball-bearing swivel type pulley permits any direction of pull with a minimum of friction. For use with ⅛" rope or cable. Elgin Exercise Appliance Co., Elgin, Ill.

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in seconds

USE ZEPHIRAN TO HELP CURB THE CURRENT MENACE TO HOSPITAL HEALTH

Preoperative preparation • Scrub-up • Surgical dressings • Wound irrigation • Sterile storage of instruments • Furniture, wall, and general sickroom disinfection • Laundry

Zephiran chloride, brand of benzalkonium chloride refined (to ensure quality). **WINTHROP LABORATORIES, NEW YORK 18, N. Y.**

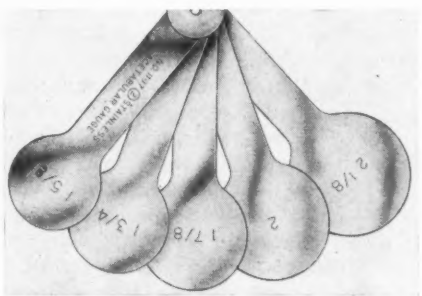
13356M

232. Dish truck

New line of high-quality stainless steel dish trucks are shipped knocked-down, reflecting savings up to 35 percent, according to the manufacturer. Line consists of three models: a small 2-shelf model, a large 2-shelf model, and a large 3-shelf model. Rugged construction; mounted on casters with ball-bearing rubber-tired wheels; all styles are available with continuous rubber bumpers if desired. Simple, illustrated instructions are enclosed in each carton; no special tools are required to assemble. May also be purchased completely set up. Jarvis & Jarvis, 100 Pleasant St., Palmer, Mass.

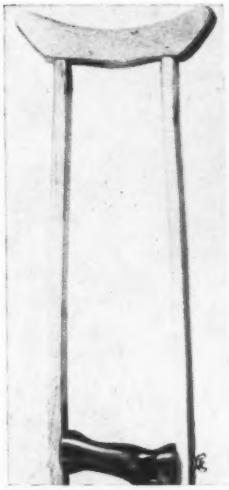
233. Swing-door cabinet

New 42"-high cabinet is 36" wide, in depths of 18" and 24", and has a central, single heavy-duty handle with built-in lock. Doors have 3-point latching; swing completely open for easy accessibility. Shelves are adjustable on 2" centers without tools, nuts, or bolts. Borroughs Manufacturing Co., 3002 N. Burdick, Kalamazoo, Mich.



234. Acetabular gauge

New gauge for measuring the acetabular covers five sizes in inches: 1⅝, 1¾, 1⅞, and 2⅛. Made of stainless steel. Zimmer Manufacturing Co., Warsaw, Ind.



235. Crutch grip

Functional, resilient plastic crutch grip requires no padding, will not absorb odor, is washable. Designed to position the hand for comfortable weight bearing; reduces fatigue. Adapts to all standard crutches using wing nut and bolt connections. Standard or large. J-Line Products, 9036 13th Ave., S., Minneapolis 20, Minn.

236. Detergent

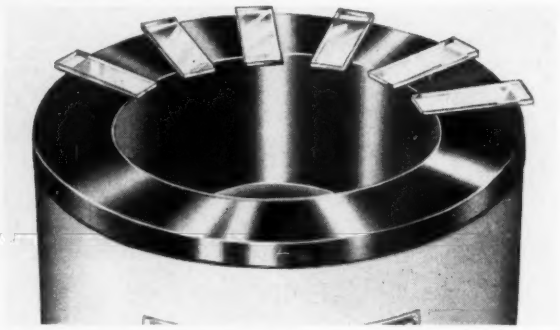
Liquid product for dishes, silver, and glassware has an ingredient that makes suds stand up longer, even in hard water. Plastic pump with each case of six 1-gal. cans or 5-gal. drum. Colgate - Palmolive Co., 300 Park Ave., New York 22, N. Y.

237. Isotope detector

New instrument detects and counts both alpha and beta-gamma activity in prepared samples. Designed for precision counting of H-3, C-14, Ca-45, and S-32, the system counts beta radiation in the presence of alpha without absorbers, and alpha in the presence of beta. High yield is said to permit shorter counting time per sample. Can be used as a scaler independently of the proportional counting chamber; can power and count from gamma scintillation counters, beta-gamma GM counters, and flow type GM counters. Nuclear Measurements Corp., 2460 N. Arlington Ave., Indianapolis 18, Ind.

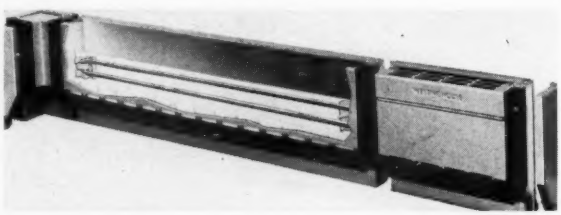
238. Portable vacuum cleaner

New vacuum straps to the user's back and facilitates cleaning in spots where space is limited. Weighs 10 lbs., has a 1-h.p. motor with Aero Cyclonic action. Throwaway paper bag inserted into the cloth filter bag permits air flow with no loss of suction. Can be converted into an easy-wheeling floor model or blower. Fabricated of high impact, low pressure moldable plastic material. Available with attachments from nine to 44 inches wide. Bolta Products Division, General Tire & Rubber Co., Lawrence, Mass.



239. Tissue-Float bath

New bath is designed to provide a constant temperature bath for preparing tissue sections. The sections are floated on the water surface, eliminating distortion, wrinkling, folding. Seamless aluminum interior is black anodized to provide contrast; 2½" wide rim for holding and preheating glass slides. Built-in adjustable thermostat; 300-w. low capacity heater; pilot light. Labline-CS&E, 3070-82 W. Grand Ave., Chicago 22, Ill.

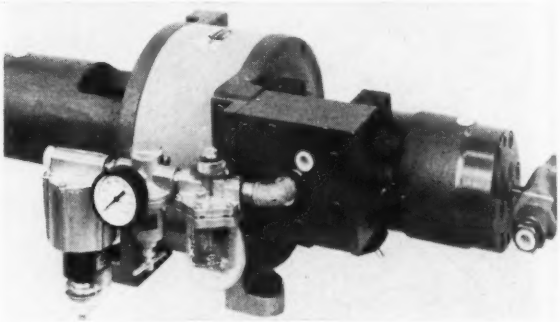


240. Baseboard electric heat

New line of baseboard electric heating with sealed Corox element is available in two-, four- or six-foot sections with heating capacity of 250 watts per linear foot. Room temperature can be maintained within two degrees of desired temperature; surface of baseboard remains cool to the touch. Included in line are electrical outlet, corner, end, and blank sections; can be either surface mounted or recessed. Westinghouse Electric Corp., P.O. Box 2099, Pittsburgh 30, Pa.

241. Glove box

New glove box of stainless steel, and laminated safety glass for security from fire, is designed for laboratory use in plutonium work. Completely sloping to prevent worker from striking his head on the box when viewing the interior, front is of glass for full interior view. Contains adequate space for equipment such as a furnace, spectrophotometer, balance. Shelves have movable supports; facilities within the box can include air, vacuum, hot and cold water, and electrical outlets. Two filters permit operation while one is replaced. S. Blickman, Inc., 8400 Gregory Ave., Weehawken, N. J.



242. Air-operated pump

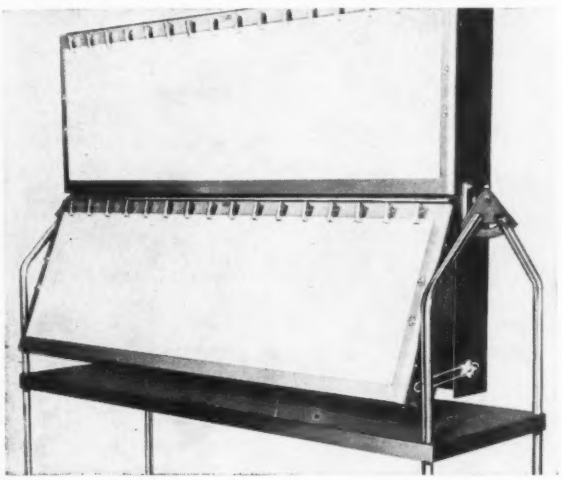
New line of air-powered pumps develop liquid pressures up to 50,000 psig. at temperatures up to 500°F. Ideal for locations where electrical power is not available, or where such power is dangerous to use. Liquids which may be pumped include oil and water, various chemical solutions. Of duplex design, one piston providing suction, the other delivering a high-pressure fluid. The piston has a very small clearance volume at the discharge stroke, resulting in more efficient pumping. Arm-crank action has been eliminated, automatic air-transfer valve reverses the flow of air pressure from one side of the drive piston to the other, maintaining continuous action as long as air pressure is maintained. American Instrument Co., Inc., 8030 Georgia Ave., Silver Spring, Md.

243. Food service

Building block principle of new food service equipment centers around three Junior Food Bank units, used individually or together in various vertical or horizontal combinations of hot and cold cabinets. The remote and self-contained units can be combined in any variation of hot, cold, and freezer cabinets, utilizing any combination of tray slide units and flush-front drawers for bread and roll warming. Temperatures on warmers are thermostatically controlled between 100° and 200°F; cold units between 38 to 40 degrees, THERMoCOLD Corp., div. of McCall Refrigerator Corp., Hudson, N. Y.

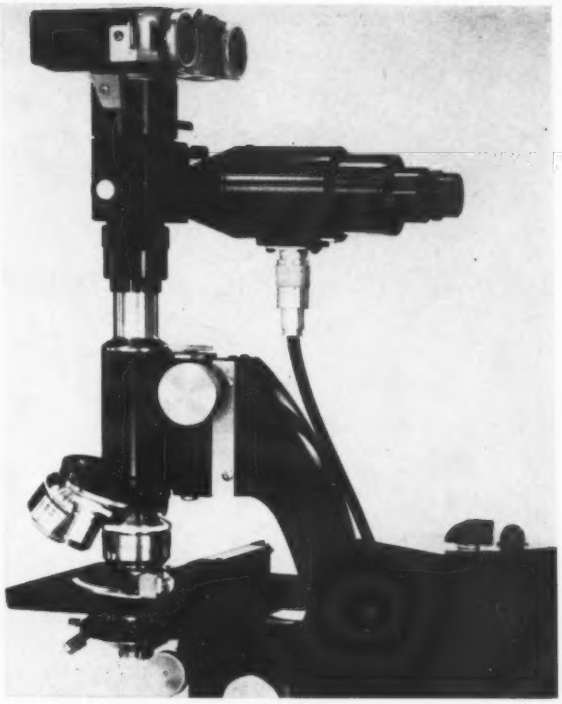
244. Neurosurgery headrest

New universal headrest is adaptable to any standard surgical table having side rails on its back section; simple to install, easy to operate. Built with aluminum castings with impervious baked enamel finish and chrome plated steel tubing for maximum strength, complete assembly weighs 15 lbs. Padding is porous cast rubber; primary head support has three additional supports on adjustable arms, permitting complete mobility. Lateral supports may be used to provide additional lateral stability if desired. Cast clamps fit table side rails of various thicknesses and widths. Supports lock at any desired position. V. Mueller & Co., 330 S. Honore St., Chicago 12, Ill.



245. Mobile viewer

New 4-over-4 mobile unit for multiple viewing or the study of case histories also comes in 5-over-5 and 6-over-6 viewing areas, and can be had without the stand for wall mounting. All sizes feature individual 14″x17″ fluorescent-lighted viewing panels and exclusive mechanism which permits easy tilting of upper and lower panels to any angle desired – 45°, 60°, or 90°. Available with circline bulbs, and either roller grip or magic grip film retainers. Wolf X-Ray Products, Inc., 93 Underhill Ave., Brooklyn, N. Y.

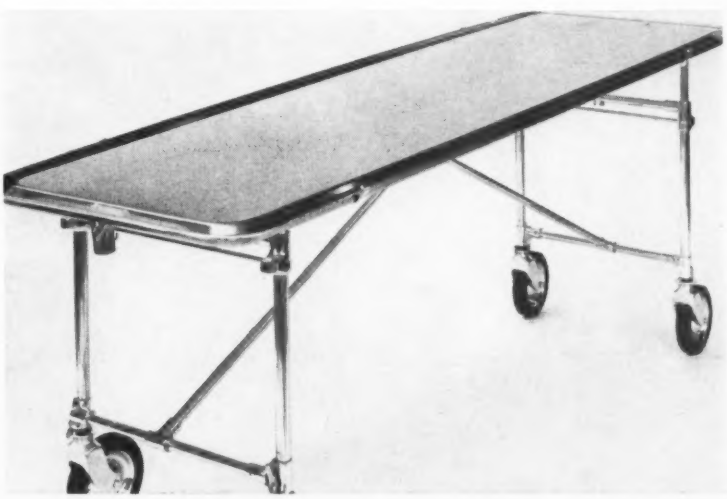


247. Ultraviolet microscope

First ultraviolet microscope which permits visual focusing by use of the new RCA "ultrascope tube" eliminates use of a substitute visual wavelength to estimate ultraviolet focus, and is expected to have wide application in medical research, especially in the examination of living cells. The ultrascope tube is an electronic component capable of receiving an ultraviolet image at one end and converting it into a visible image, to be viewed under magnification, at the opposite end. It is additionally expected to have clinical usage for tissue cell screening, bone marrow observation, and the determination of hemoglobin in the liver. Unit includes microscope, U-V optics and image converter. Portable, it occupies a minimum of laboratory space. Bausch & Lomb Optical Co., Rochester 2, N. Y.

246. Embalming table

Storage convenience and versatility are major advantages of new table, which can be used for embalming, dressing, layout, or transfer. Locks rigidly in place to provide stationary work surface; convex top of stainless steel lets fluids run off to all-around drain channel, featuring a 1½″ drain spout with pail hook. Exclusive one-hand release permits easy adjustment from 29″ to 35″, each end operating independently to achieve height and drainage desired. Over-all size, 79″x 27″; folds to 4½″ thick; weighs six lbs. Ball-bearing wheels on 6″ rubber tires. Ferno Manufacturing Co., Greenfield, O.



TOPICS CAMERA TOURS

the PEDIATRICS CONVENTION EXHIBITS

Left: Robert G. Gaw (l.), of Johnson & Johnson, discusses Liquiprin, new analgesic-antipyretic, with Clifford L. Lamar, M.D., and John W. Simpson, M.D. (r.), both of Birmingham, Ala. The medication, in non-spill safety bottles, is indicated in fever, headaches, minor aches and pains, teething, and following immunizations. C-260.

Right: Lewis T. Corum, M.D. (l.), Tampa, Fla., and William Humphreys, M.D. (r.), Panama City, Fla., are informed on Chel-Iron, oral iron therapy, by Harry S. Kinney, of Kinney & Co. Product exhibits unusual solubility and freedom from ionization; there is an optimal physiologic uptake of iron chealate, and it is well tolerated whether it is taken between or with meals. C-261.

Below: Calvin Isaacson (l.), of Eaton Laboratories, describes the properties and action of the company's new Altafur to Francis Mastrota, M.D., of Arlington, Va. Altafur is stated to be the first nitrofuran proven effective orally in systemic bacterial infections. Sensitivity to staphylococcus, including antibiotic-resistant strains, is reported to approach 100 percent in vitro. C-262.

Below: Tao, designed for superior control of gram-positive infections, is the subject claiming the attention of Ray Sandlin (l.), of J. B. Roerig & Co., and Eugene Jabbert, M.D., of Manchester, N. H. Recommended in respiratory, skin and soft tissue infection; in high fever, temperature is usually reduced within 24 to 48 hours. Tao is available in capsule or in bottles for oral suspension. C-263.

Above: Joe M. Strayhorn, M.D. (r.), of Nashville, Tenn., gets the story of Actified tablets from John E. Einan, of Borroughs Wellcome & Co. The medication, available in tablet or syrup form, is recommended for nasal congestion and rhinorrhea, regardless of etiology, and has a low incidence of side effects. Potent anti-allergic action; no ciliary inhibition. C-264.

Above: Ernest Carlo, M.D. (r.), of Fort Wayne, Ind., examines a bottle of Ilosone Drops given him by Otto Sredl, of Eli Lilly & Co. The antibiotic drops, supplied with a specially calibrated dropper for accurate dosage, are flavored with fruit and cinnamon, have no unpleasant antibiotic taste or aftertaste. Side effects are infrequent, usually mild in nature. C-265.

Right: James S. Vedder, M.D. (l.), of Marshfield, Wis., examines new disposable AK-U-SET clamp held by Robert L. Duke, of Amsco Laboratories, while Capt. E. R. Moeller, M.D., of San Diego (Calif.) Naval Hospital looks on. Clamp affords positive control, with one hand, of rate flow when used with company's flexible administration set. C-266.

Below: Paul Kahn, of Dome Chemicals, Inc., demonstrates Acne-Dome creme to Arnold V. Wong (l.), of Barksdale AFB, Louisiana, and Vince L. Hutchins, M.D., of San Francisco, Calif. The treatment for acne and pimples, plus cosmetic concealment, is available in creme or compact form in medium and medium-dark shades, in regular or double strength. C-267.

Right: Nicholas Katona, M.D. (r.) questions Chris O'Reilly, of Lederle Laboratories, about the indications for use of the company's new Declomycin. A broad-spectrum antibiotic derived from a strain of Streptomyces aureofaciens and closely related chemically to tetracycline, but with its own distinct properties, the product has greater and longer-lasting antibiotic potency, making it possible to achieve and maintain therapeutic activity with less weight of antibiotic. C-268.

FILMS, NEW LITERATURE

271. Housekeeping

Three new data sheets offer useful, workable suggestions for institutional maintenance: *Typical Duties of the Hospital Housekeeper* lists basic as well as 17 specific duties of hospital housekeeping; *Fighting Cross Infection During Hospital Construction and Renovation* stresses the importance of intensifying sanitation maintenance during these periods; and *Common Problems Where Food Is Handled* provides a check list for supervisory personnel to use to determine basic problems involved in feeding large numbers of people. Puritan Chemical Co., 916 Ashby St., N.W., Atlanta 18, Ga.

272. Glove processing

How to Process and Care for Surgical Gloves gives a suggested work flow layout of equipment shown, and discusses 10 basic steps in glove processing in full detail. Mechanical washing, drying and powdering is also described, and annual cost analyses for 100- and 300-bed hospitals are included. Rotary Hospital Equipment Corp., 1746 Dale Road, Buffalo 25, N. Y.

273. Analytical balances

New 12-page catalog lists complete line of Stanton analytical laboratory balances. Seven different types, including new thermo-recording and micro-chemical balances, are described in detail. Order information includes all variations and options, replacement parts, and maintenance service. Illus. Burrell Corp., 2223 Fifth Ave., Pittsburgh 19, Pa.

274. Hood ventilators

New eight-page catalog gives detailed description of Morrison Filtaire line of packaged range hood ventilators. Self-contained unit eliminates grease, smoke, heat and odors by blower pressure directly above the range. Procedure for engineering installation and selection of correct size unit also included. Morrison Products, Inc., 16818 Waterloo Road, Cleveland 10, O.

275. Glassware

New catalog contains 225 items, fabricated from Pyrex brand glass No. 7740, essential to the hospital and laboratory. Each category includes the most frequently used types, plus new items, including applicator, hospital and labeled sundry jars. Mercer Glass Works, 725 Broadway, New York 3, N. Y.

New Microscope May Aid Study of Virus

A proton microscope that may have greater resolving power than the electron microscope and facilitate study of minute structures, including virus, that escape observation with existing instruments has been built at Laboratories of the College de France, Paris.

About eight feet tall, the new device uses the same type lens as an electron microscope, but focuses protons instead of electrons on the fluorescent screen. Protons make greater resolution possible because they have a far shorter wave length than electrons, according to Claude Magnan, associate director and developer of the instrument.

Rubber reinforced bandage

The ultimate of Elastic Bandages based on all comparative features. The Combination of quality cottons and "heat resistant rubber" threads in a perfect balance assures a finer more rugged product. Consider the thread count, rubber content,* weight per square yard, length of bandage and all contributing factors.

CONCO RUBBER REINFORCED BANDAGES will be found to be the best in every respect, where comparative testing is done. After considering every quality feature then consider economy. You'll find you are way out front – in every respect.

*Contains twice as many rubber threads as most other brands.

Manufactured in a full line of sizes. Each bandage individually wrapped for cleanliness, and clips available on opening the wrapper. Every bandage a *full* 5½ yds. stretched.

CONCO SURGICAL PRODUCTS
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TRADE TOPICS . . .

Members of the Hospital Industries Association board elected at the H.I.A. meeting during the recent American Hospital Association convention are, l. to r., Robert T. Ulsh, Cutter Laboratories, Steven Scudder, Jarvis & Jarvis, Inc., and Wayne Wilson, American Laundry Machinery Co.

Above, l. to r., Roland F. Simons, Ethicon, Inc., outgoing H.I.A. president, and Harry DeWitt, American Hospital Supply Corp., newly elected president.

Sales Personnel Changed In Hamilton Department

Hamilton Manufacturing Co. has changed sales managerial responsibilities of its contract equipment department. C. H. Rippe, formerly sales manager of the firm's professional products department, has been named contract department sales manager.

C. W. Altmann has been appointed sales director of special products, and V. F. Hall has been named sales director of hospital and clinical equipment.

Miles Laboratories, Inc. Acquires New Subsidiary

Miles Laboratories, Inc. has acquired Dome Chemicals, producer of dermatological products.

Irving Wershaw, founder of Dome Chemicals, will be president and chief executive of the subsidiary and a vice-president of Miles Laboratories.

Francisco Foz has joined Miles International, Miles Laboratories, Inc. division, as assistant medical director. He formerly was a multilingual medical copywriter for Merck Sharp and Dohme International.

Baxter Names Marketing Vice-President Assistant

Several personnel changes have been announced at Baxter Laboratories, Inc. William T. Murphy has been named assistant to the vice-president of marketing. He previously held a marketing management position at Schieffelin & Co.

Joseph A. Moore has been appointed public relations manager. He formerly was public relations director, East Orange (N.J.) General Hospital.

Thomas A. Garrett, M.D., has been named medical director. He has held similar positions with Irwin, Neisler & Co., J. B. Roerig & Co., and Chas. Pfizer & Co., Inc.

Lakeside Laboratories Makes Ten Promotions

A series of promotions has been announced by Lakeside Laboratories, Inc. Harvey L. Daiell, M.D., has been advanced from vice-president for research to senior vice-president and a member of the board of directors.

Succeeding Dr. Daiell is Harris L. Friedman, M.D. Harry M. Leyland, formerly director of clinical investigation, has been promoted to associate director of research.

Named head of the new marketing division formed to coordinate all marketing activities is Wyman Guin, previously vice-president in charge of advertising.

William A. Hartstone has been promoted from domestic sales manager to vice-president and director of trade relations. John Sladek, formerly district sales manager, has been named to succeed Mr. Hartstone. Robert Furr has been advanced to field sales manager from manager of sales education.

Howard D. Evans has been promoted to director of advertising and promotion, Mrs. Helen Martin to advertising manager, and Wendell Perry to manager of promotion research.

Mead Johnson Names Arnold Research Head

Richard T. Arnold, Ph.D., has been appointed director of research, Mead Johnson & Co. He formerly was administrator of the basic science program, Alfred P. Sloan Foundation, N. Y., and head of the department of chemistry, University of Minnesota.

Dr. Arnold is widely recognized as an authority in theoretical organic chemistry and has been the recipient of many honors. He was the first to prove that many chemical reactions take place through an intermediate cyclic transition state.

Williard Nicholl, M.D., has been named associate director of clinical research. He formerly practiced at Western Montana Clinic, Missoula.

NEWS BRIEFS

Disposables, Inc.—is the new corporation formed in New York to exclusively manufacture and sell disposable paper clothing. The product line, to be marketed under the trade name "Abanda," includes shirts, pants, laboratory or shop coats, aprons, hats, overshoes, and medical examination gowns.

(Continued on next page)

Souren Avakian, Ph.D.—has been named director of research, Denver Chemical Manufacturing Co., Stamford, Conn. The firm's drug products are marketed through Wampole Laboratories division.

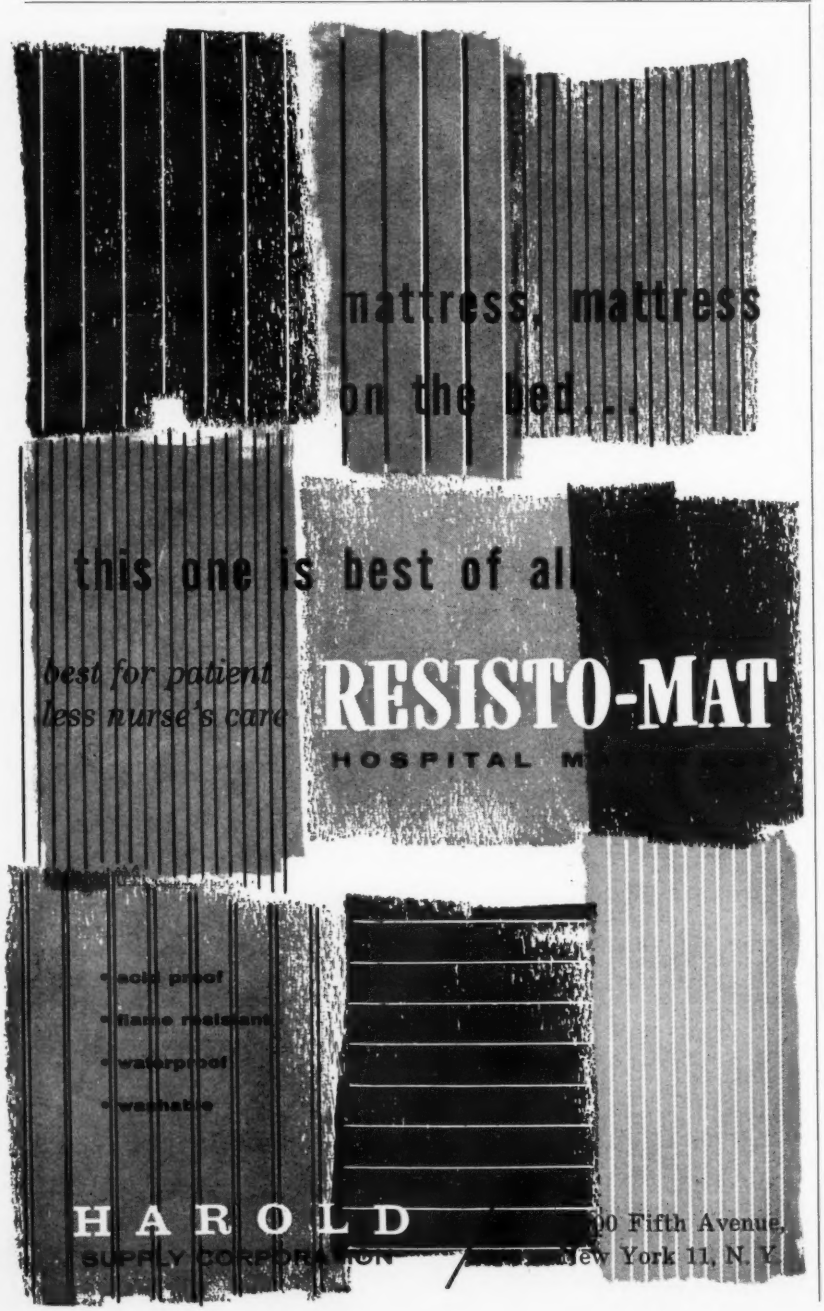
Dr. Avakian was most recently assistant research director, organic research, National Drug Co.

* * *

LaVern Runkel — has been appointed director, suture production, Gudebrod Bros. Silk Co., Inc. He formerly was suture product manager, Ohio Chemical & Surgical Equipment Co.

* * *

Rossiter L. Seward, Jr. — has been appointed director, international division, Endo Laboratories, pharmaceutical manufacturers. He previously was director, field operations, for the Far East and South African area for Merck Sharp & Dohme International.



Shampaine Industries, Inc.—recently purchased Hubeny Brothers, Inc., manufacturers of metal industrial specialties and assemblies. The firm will retain its name as subsidiary and will add to its present line of products: equipment for industrial and hospital laboratories and operating rooms.

John Hubeny, president, and Jeremiah Hubeny, executive vice-president, will remain with the company in their present positions.

* * *

Peter Hoffman—has been appointed distributor for Minnesota and North and South Dakota, Zimmer Manufacturing Co. He succeeds **R. J. Parranto.** Mr. Hoffman was formerly sales manager engineer, Orthopedic Frame Co.

* * *

E. Henrys and **T. W. Eckels** — have been elected to the board of directors, Ethicon, Inc. Mr. Henrys formerly was vice president of advertising, and advertising manager.

Mr. Eckels was previously vice president, sales, and director of sales.

* * *

Jack Levy — has been appointed assistant division manager, New York division, Ketchum & Co., Inc., drug wholesalers. He formerly was New York division sales manager.

* * *

Joseph T. Lee—has been named assistant advertising manager, Ritter Co., Inc. He formerly was assistant sales manager, medical-dental division, Wilmot Castle Co.

* * *

X-Ray and Medical Equipment, Inc. — will distribute in Hawaii products of Central Scientific Co., Cenco Instruments Corp. subsidiary.

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STERILE DISPOSABLE NEEDLES

for the benefits of disposability...

PLUS NEW

EASY-ENTRY POINTS
smooth, drag-free penetration

SAFER-HANDLING HUBS
surer finger grasp

TAMPER-PROOF PACKAGES
assured one-time use

FULL-PROTECTION SHEATHS
in the package—after filling—
to the moment of injection

now in sizes to meet most parenteral needs
manufactured, sterilized and controlled by

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CUBE-PAC™

plastic blood collection and transfusion unit

the NEW dimension in blood-banking

Samples and literature to Hospitals and Blood Banks on request.

CUBE-PAC is a nonwettable, pliable plastic unit, containing 72 ml. of ACD formula A, U.S.P. and N.I.H. for preservation of 480 ml. of blood. Individually packaged with disposable, sterile, nonpyrogenic blood collection set, in laminated-foil paper vapor-barrier envelope, protected by an outer shelf carton.

ADVANTAGES

1. Outer retainer insures automatically measured volume. Unique "pop-up" indicator flap signals completion of collection . . . guards against overbleeding problems.
2. Storage, before use, saves approximately 60% of shelf space over conventional blood collection bottles.
3. Cubical shape assures comparable savings in refrigeration storage.
4. Stands alone . . . no racks, hangers or special equipment required for support.
5. Attached identification label flap provides for permanent, tamper-proof pilot tube and two additional serology tubes.
6. Identification label flap provides convenient writing surface, or for affixing special institutional labels.
7. Adaptable to all Plexitron® administration sets, including Series and Y-Type sets. Complete closed system . . . no venting required.
8. For plasma aspiration either Plasma-Vac bottle or corresponding plastic unit are available as preferred.

For those who prefer plastic blood therapy units, CUBE-PAC *affords every modern advantage.*

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